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HORSES AND RIDING.

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CHAPTER I.

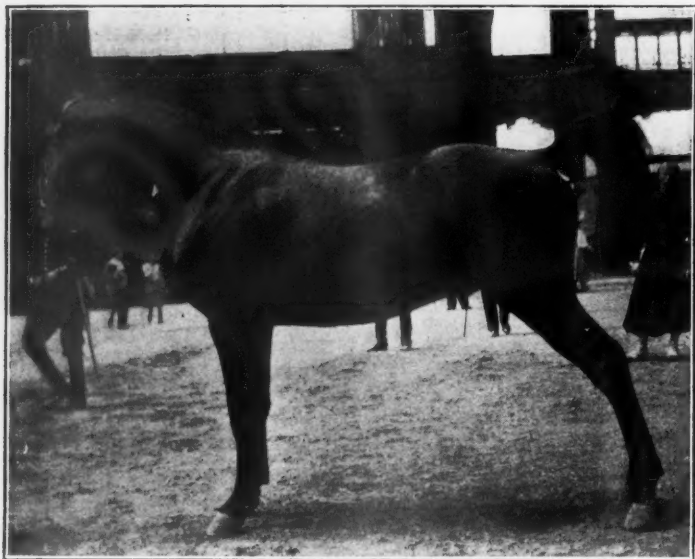
BREEDS AND FAMILIES OF HORSES SUITABLE FOR RIDING.

M. AUREGGIO, the authority on this subject in France, says that the Italian cavalry officers are better mounted than those of any other country. The chargers so highly commended are Irish weight-carrying hunters, and cost from \$400 upwards. But there is no such breed or even family by which to identify these horses. They are for the most part nearly thoroughbreds; but, until a strain is established, an excellent result of a cross is really an accident, and the good qualities of an Irish hunter are due partly to the judgment of the breeder, partly to climate, and partly to early training given them in leaping and in climbing obstacles, not to speak of discretion in buying. At home they are never well trained saddle horses; but in the hands of Italian horsemen they soon become thorough chargers capable of wonderful exertions in crossing a cramped or difficult country, and

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there is no better horse for heavy weights than the best of one of these fortunate chances.

Occasionally the thoroughbred makes a horse that may be suitable for any purpose, but the blood horse has not the agility and pliancy that should characterize the perfect hack, hunter or charger and it is too apt to trip in the walk and in the slow trot. The writer has trained a number of thoroughbreds and usually found them docile and submissive,



ENDORÉ. ANGLO-NORMAND.

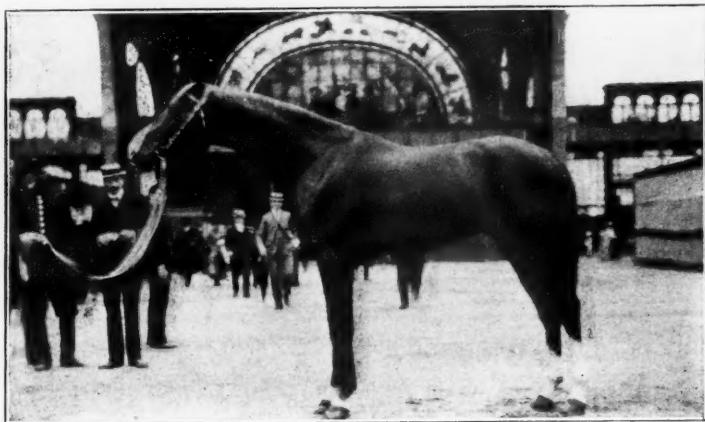
Property of Raoul Ballière, Caen, Normandy. The finest horse in France for Cavalry.  
Photographed by the Author.

even such as have been taken from the racing stables; but their strides are too long and too close to the ground for safety, although collecting the forces of the extremities temporarily overcomes these faults in the hands of a competent rider. M. James Fillis and the ecuyers and stallmeisters of the riding academies may select the blood horse, but this is written for general riders, and not for the skillful.

Although there is no rule regarding the shares of strains

in the Anglo-Normand beyond the requirement that it shall have at least half of the blood of the thoroughbred, and many have a very liberal half, it may be accounted as a distinct breed owing to the homogeneity due to what horsemen call the prepotency of the Normand side. The large horse represented by the photographs of this work is an Anglo-Normand from the stud farm of Annecy. The Anglo-Normand is the handsomest of the large horses and has many admirable qualities.

The *Tarbais*, or horse of Tarbes, was originally a cross of the Arab upon the horse of the *Midi*, which was in itself



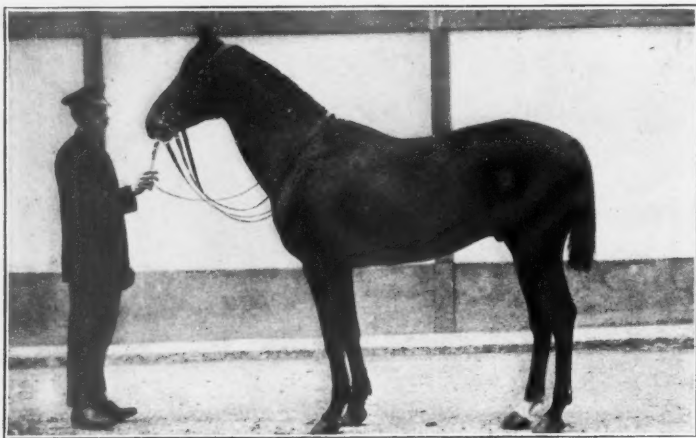
ANGLO-ARAB.

Purchased by the Italian government.

Photograph by the Author.

largely of Eastern blood, the product being a small animal of great stamina and activity. But the present *Tarbais* of the government farms has a large infusion of the English blood horse, although in the south of France the smaller horse, *Tarbais*, Anglo-Arab, and even the Arab, is held in high estimation. The horse I rode for the gallop-change, the halt in the gallop, etc., is registered in the stud book as Anglo-Arab qualifié; that is, it had some of the strains in its veins of the old stock of the south of France as well as those of its English and Eastern ancestors.

The more highly bred of the typical Hungarian horses are nearly thoroughbred with a dash of Eastern blood introduced more recently than the similar strain that is in the make up of the English race horse. The Hungarian is held in high esteem for light cavalry and for riders of medium weight. It has great powers of resistance against changes of climate and against long continued fast work, for which reasons it is generally considered the most valuable of the smaller breeds. A cavalry officer who has had a very wide experience with horses of many varieties told me that he



ANGLO-ARAB. (*Qualifié*).

Property of the Author. Photograph by the Author.

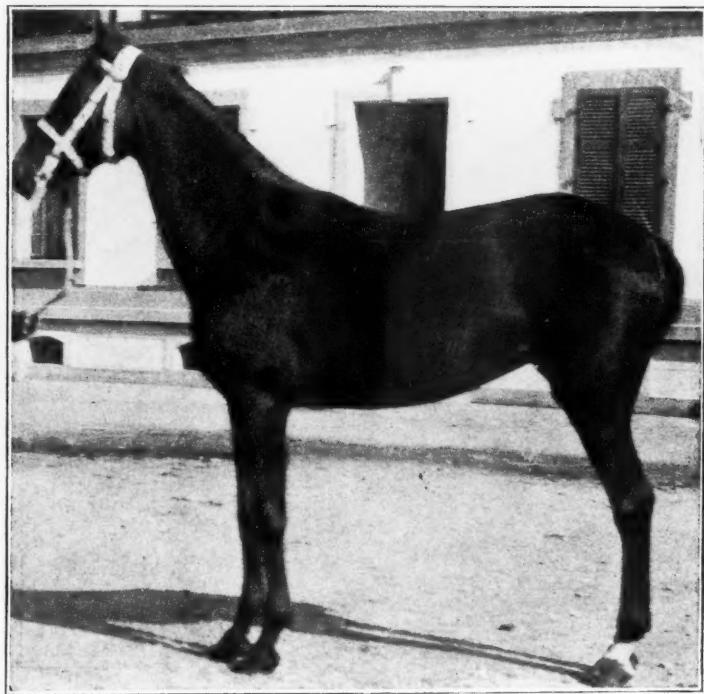
preferred horses of this breed to any others, and that while they were at first difficult to train they became very trustworthy after they had given submission.

The *Barb* was formed originally by a cross of the horse of northern Europe, introduced by the Teutonic invaders, upon the horse of northern Africa. It was long celebrated for its docility and for its hardiness. These qualities are said to be retained by the very "mixed" lot that are still called Barbs, into which Arab and English strains have been introduced more or less. Of course there have been, from very early



times, numbers of desert bred horses, or of their descendants, brought into Africa, and many of these have been kept more or less pure. I feel rather certain that the "Barb" ancestor of our race horse was one of these Arabs.

In Algiers the French government has endeavored to re-establish the best form of the horse of northern Africa by



HUNGARIAN

From the Zechy Breeding Farm. Photograph by the Author.

forming breeding farms and by arranging a stud-book in which the pedigree may be entered and preserved.

For grace, beauty, temperament, and every other good quality that a riding horse should possess there is no breed, family or strain superior to the Denmarks of the Blue-grass region of Kentucky. They may not have the speed of the

blood horse, the resistance of the Barb, or the stamina of the Hungarian, but for confidential use they are incomparable. The inbred Denmarks, and the highest authorities say that a saddle horse cannot have too many strains of the celebrated ancestor, must be nearly thoroughbred with, almost eliminated, crosses of the Canadian pacer and the Morgan trotter.

It will be seen that nearly every horse that is held in high consideration in Europe or in America has a very large pro-



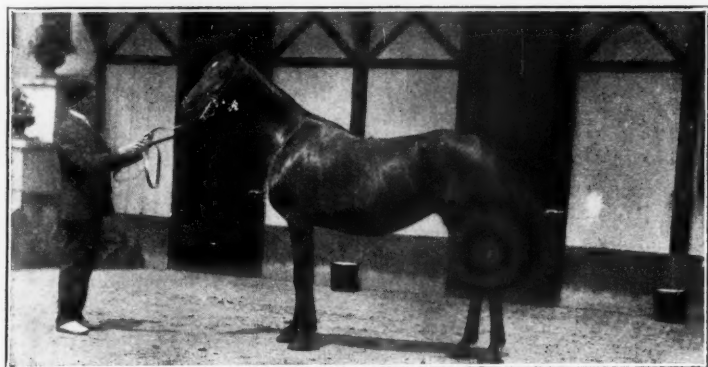
BARB. AMOURANIA.

Algerian Stud Book. Photograph by J. Delton, Paris.

portion of the blood of the thoroughbred, and it is certain that no other breed has such power of transmitting its good qualities, or has so many good qualities to transmit. The writer is not prepared to say that the race horse is deteriorating in the efforts of breeders to produce "sprinters" for short distances, but such competitions as the three and four mile heat races in which Lexington, Asteroid, Kentucky and

many other horses of the middle of the nineteenth century took part are no longer favored, and it might be difficult to find rivals should one of the old four-milers reappear with "Uncle Anson" responsible for its condition.

As every thoroughbred must trace its ancestry back to one of three eastern horses, Darley's Arabian, Byerly's Turk or Godolphin's Barb, and has in fact the blood of all three in its veins, it is self-evident that the desert horse has had much to do in bringing a refining influence upon some coarser but more useful breed that had existed in England previous to



PURE BLOOD ARAB MARE. KAHLIFA II.

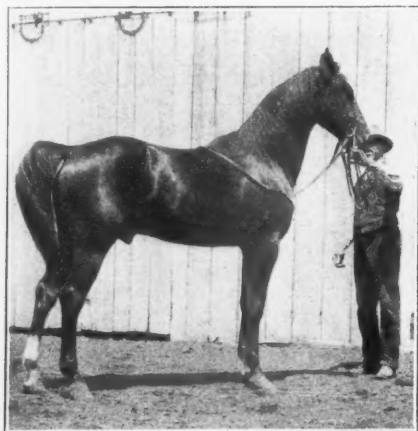
Registered in French Stud Book. Seventh in descent from the tents of Nedj.

Photograph by the Author.

our history of the matter. But whatever may have been the true origin of the thoroughbred, it has been for more than a century the noblest race of its species, and it is infinitely superior to any horse that has ever appeared in the Orient.

It remains to be said, however, that any strong horse may be made, by schooling, a very agreeable riding horse, even when it has slight defects in conformation, for such may be nullified by careful handling. Indeed the most perfectly formed horse must be rough and awkward under a rider until it has been given, or has acquired an artificial bearing

suitable to the unnatural conditions of carrying a burthen and of having its impulses checked, hampered and harassed by bit and spurs.



AMERICAN SADDLE HORSE. STERLING CHIEF.  
Property of Colonel J. T. Woodford. Photograph by the Author.

## CHAPTER II.

## A FEW GENERAL REMARKS UPON RIDING.

I accept, without reservation, the saying of that fine horseman, Colonel Vigier von Steinbrugge, that no one may be considered a rider who does not understand the principles of Baucher. But Baucher's meanings are often so obscure as to require explanation, and, further, in his later writings he carried theories too far for practical use.

In simple but comprehensive language Baucher's idea was *to obtain complete and instantaneous obedience from the horse by the cultivation of the instinctive muscular actions which follow the application of the hand and heel.* This formula was a stroke of genius, and proved Baucher to have been the greatest horsemen that the world has seen. Unfortunately for the art his contemporary, Comte d'Aure, had the ear of France, and was the director of the *L'école d'Application de Cavalerie* at Saumur, and this opposition to the finished method of his rival has had in some ways a bad influence upon general horsemanship. I think that I can truthfully say that I am familiar with nearly every work and text book on riding that carries any weight, from the days of the pupils of Pignatelli down to the present time; that is, for about four hundred years, and I do not hesitate to express the opinion that many of the manuals of the great armies of Europe have always been, and still are, full of errors and contradictions. The prime faults being in the rules for demanding the gallop, and for making the turns and wheels; if these are not evident to any one who reads the works in question it is not worth while discussing the matter, although I may explain for the uninitiated, that their rules for demanding the gallops among other fallacies would tend to make the horse false in the changes of direction in that pace. The only book published recently in a foreign language that I can recommend is that of Mr. James Fillis which appeared, I have a right to remark, four years after I had properly and fully explained the gallop-change in the 1886 edition of "Modern Horse-

manship." It must be noted, however, that although Fillis is evidently a follower of Baucher his criticisms are really aimed at some very poor drawings which were intended to illustrate the work, for Baucher always deprecated the lowering of the head of the horse and the custom of permitting

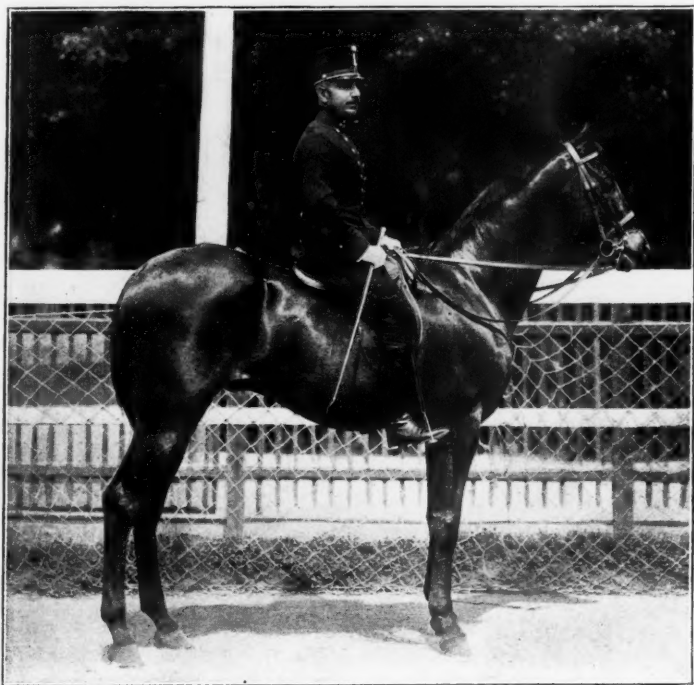


CAPTAIN CROUSSE OF THE FRENCH ARMY, ON CONSPIRATION.

Winner in 1908 at Paris, Rome and Brussels. Photograph by J. Delton, Paris.

the face to make less than a right angle with the plane of movement, and in the carefully prepared portrait of the master upon *Partisan*, the horse is represented as carrying its head sufficiently high.

When a horse will move smoothly and evenly under its rider we are approaching that condition of the union of the weights and forces of the extremities known as the *equilibrium*. Of course in a state of perfect equilibrium there would be no motion, but for safety, for obedience and for cadenced action there must be a certain approach to the union and balance of the forces under the rider, and this takes place



CAPTAIN VON PONGRATZ

One of the finest horseman of the Austrian Army.

Photograph by A. Huber, Vienna.

whenever a horse is pleasant to ride, whether the man knew or did not know how the affair was accomplished. It is the "fad" nowadays, of pretenders to horsemanship, to let the horse go along in a disunited, slovenly manner; this is not only an ugly sight but it is dangerous for those who practice

it. This mode of riding may be seen in Rotten-row, in Central Park, and, more especially, on the ride of the Avenue du Bois in Paris; but real horsemanship is exhibited in the Concours of Paris, of Brussels and of Vienna by such riders as MM. Leclerc, Liebenstein, Crousse, von Pongratz and by hundreds of other gentlemen of intelligence and skill who maintain the art in its integrity, for horsemanship is an art that requires study and practice for any proficiency.



GENERAL VON MITZLAFF.

Superintendent of the Cavalry School at Hanover.

Photograph by Berger, Hanover.

Owing to certain reasons "Charre," the Anglo-Arab which was employed for the larger number of photographs in this book, had many interruptions in its training previously to its appearance before the camera; and it had been ridden in the open only some six weeks before it was ready to make the gallop-change and other movements, on the Normandy coast, as are shown by the pictures. The Anglo-Normand, trained in Switzerland, had even less attention given to its



handling before it was ready for the travers gallop and other movements in that pace, for it took readily to the gallop.

The education of a horse can be carried on much more rapidly by the work on foot, as suggested by Baucher, than



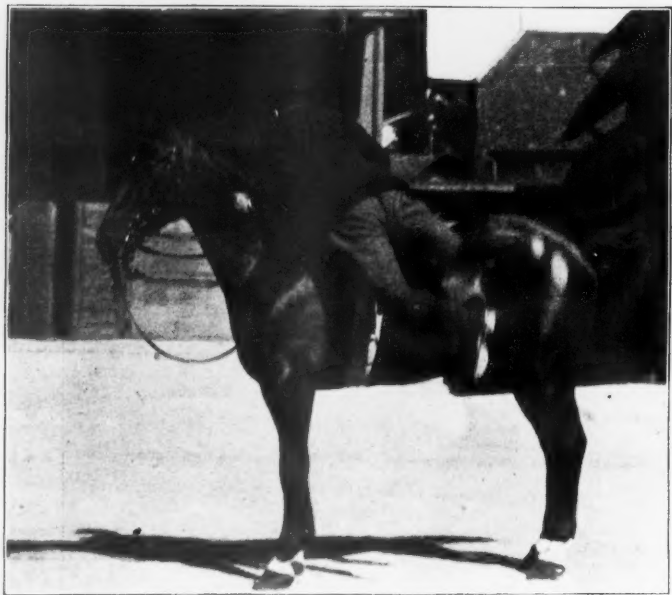
VAULTING INTO THE SADDLE.

Photograph by M. F. A.

by the mounted exercises alone; and I believe that a horse could be completely trained without the rider mounting, although I have never quite proved that to myself, as I have always been too desirous of getting upon the back of the

animal I had in hand in order that I might have the feel of the saddle.

I once wrote a little work on "The Simple Art of Horsemanship," but before it reached the hands of an editor I found that a lady had used the same title in a periodical, and so my paper, in *Country Life in America*, was entitled "The Whole Art of Horsemanship." The art is in fact extremely simple, and in half an hour a complete knowledge of its



DISMOUNTING.

Photograph by Dorothy Woods.

principles should be acquired by any one who has a taste for riding. It takes long practice to make a good rider, and aptitude is necessary for excellence; it is certain that the longer a beginner sticks to the walk, and studies his position, the better and stronger will be his seat. I think that proficient horseman, de Bussigny, was jesting when he said that it required fifteen years at the walk to give a perfect seat on the

horse; but fifteen days will not bring it as many tyros seem to believe.

It was as long ago as 1857 that Henri Franconi taught me the method of Baucher; notwithstanding, I find that I ride as strongly as I ever did, and take as much pleasure in training young horses as when I began the fascinating work; indeed, from constant practice in riding and in moderate gymnastics I am as active as one could wish, and I can vault into the saddle or leap to the ground without difficulty. It should be understood that I am an amateur, having no saddle horses for sale; when an animal proves unsuitable it is sent to the auctioneer and sold anonymously, never to be heard of again. The echo of a horse deal is seldom agreeable.

I wish to repeat what I have often said, that there is neither formidable nor esoteric knowledge in the training of a horse. If a proper method is employed pupil and master proceed without friction and riding is a wholesome, fascinating sport of which a man should never tire until he seeks the chimney corner and an easy chair.

It is always advisable that the beginner should have a very steady horse which he will find that he improves with his own progress, and he will bring the horse up to his skill, but no further. All horses that are active enough for the saddle must have plenty of work or they may become too lively and skittish, and vices often result from the play of a fresh horse. A skillful rider can always keep his horse steady with the spur; but there is not one man in a thousand of those who ride who knows how to use the sharp rowel, or who has the patience to employ it with that delicacy and discretion that makes it the powerful instrument that it may become.

## CHAPTER III.

## THE SEAT OF A HORSEMAN.

In these days we have but one form of saddle-tree, for sport or pleasure riding, and each man has in it his *best seat possible*; and there are so few differences in the proper positions that may be taken upon the flat saddle, due only to the conformation of individuals, that one may say that in all civilized countries men have the same seat. No longer do we hear of such absurdities as the "tongs across the wall," of the "long seat," or of the "short seat," for a rider can have but one seat that is the best for all purposes, and this he can find the first time he mounts a horse. It is silly for a man to think it necessary to have one seat for the park or road and one for cross country, for in the park or on the road the horse may make movements as violent as it would in the hunting field or in the steeple chase.

The writer has lived many years in various European countries and he has been a guest at the military academies of Saumur, Hanover and Vienna, besides visiting scores of riding schools in a number of cities, finding nowhere among real horsemen any observable changes in the position of the man upon the horse.

Baucher's description of the seat, written nearly three quarters of a century since, is the best and clearest that could be given: "Sitting upon the buttocks let the man take every possible point of contact with the saddle with the flat inner surfaces of his knee and the inside of his thighs; the feet finding themselves parallel with the sides of the horse without effort on the part of the man, and the length of stirrup leathers being adjusted so that the tread of the stirrups strikes the heels of the man."

A sure way in which one may find this seat is for the rider to mount the horse, and, sitting without rigidity, raise his legs so that the points of the knees meet above the pommel, then to drop the knees, very gradually, until their points and the flat inner surfaces of the thighs have every

possible point of contact, the lower parts of the legs, from the knees downwards hanging loosely, until it is desired to insert the feet in the stirrup irons, when nothing more than the balls of the toes should feel the tread of the stirrups, and that in a light and elastic manner. Firmness of the seat depends upon the friction against the saddle and the suppleness of the man's body, particularly in the loins. If a man be not active he is safer and more comfortable in a motor car or in an *æroplane*, two abominations, than upon the back of a quick horse. But most men of a fair share of agility may learn to ride with pleasure and comfort at any age, provided they follow some good method.

Xenophon's description of the seat, the earliest representations upon the monuments, the drawings of Fieschi about 1550, the portrait of Louis XIII, that of de la Guérinière by Parrocel in 1733, and that of Baucher in the first edition of his work, as well as the photographs of modern riders in this book, prove that the horseman's seat has been always and must have been always the same, except the absurd situations taken by men in armor who required peculiar saddles to maintain their positions on the horse, and whose seats, according to Froissart and other writers, were very insecure.

The seat must always be maintained, but the upper part of the body must conform to the movements of the horse, in obedience to the laws of nature for holding the position upon the saddle, and the lower parts of the legs, from the knees down, must be under perfect control, and are as of much use in the management of the horse as are the hands. That is, as should be apparent to every one, when the forehand of the horse rises, the body of the rider should be bent forward; where the hindquarters of the horse are raised and the forehand lowered, the body of the rider should be bent backwards, and the parts above the hips should bend with the horse as it turns, depending in amount upon the shortness and rapidity of the turns; in other words, the laws of gravity, of centrifugal and of centripetal forces must be observed as carefully in riding as in walking.

To excel in horsemanship one requires not only aptitude for the art, but agility, adroitness and readiness. Practice

in dancing and in other callisthenic exercises are of great value in rendering the rider supple and strong; and there are many gymnastic feats which he may practice with good effect upon the horse standing in place, or moving; for example, leaning forward until one shoulder touches the crest of the horse; leaning back until his shoulders rest upon the croup; turning about in the saddle by passing one leg and then the other over the pommel and over the cantle; vaulting upon the horse and leaping to the ground while the animal rests, or is in motion, and other exercises that should suggest themselves. In vaulting upon the horse or in dismounting without stirrups, the left hand will seize a lock of the main half way between the withers and the ears, while the right hand, thumb under the pommel, will take hold of the saddle in a firm clasp. In leaping to the ground from a moving horse the man must be prepared to take some strides in the direction of the movement, maintaining control of the horse by the reins held in the right hand.

All of these exercises are very easy after a little practice, and they add quality to the rider's skill and confidence, while they render the horse quiet and accustomed to the sudden movements of the man. If when the trainer, in the beginning, finds the horse restless he should make the animal extend the forelegs occasionally, but always before mounting he should collect the horse by holding the reins under its chin and giving a tap or so of the whip upon the rump, so that the bearer should be properly under the mass before the man's weight is upon its back. The more frequently the horse is handled the more quickly it becomes steady, but no one exercise should be carried on to a point that will weary the horse, for young horses, at least, are easily bored and then become resentful.

## CHAPTER IV.

## THE UNION AND BALANCE OF THE EXTREMITIES.

I remember reading somewhere of two "supernumeraries," of jealous dispositions, who spoiled the effect of a quadrupedal representation upon the stage by a want of co-ordination between the forelegs of the artificial animal and its hind legs. Some such result takes place when the young horse is mounted; for between the restraint of the hand and the urgency of the spurs or whip, not to mention the unaccustomed weight of the rider, the forehand and hind-quarters are for a long time at variance. A young horse is awkward enough without any interferences, but when the man mounts it must be given a proper carriage in order that it may move smoothly and evenly in cadenced motions. When a horse becomes safe and pleasant to ride it is always the result of a series of experiments upon the part of the rider or because it has been scientifically handled by a trainer who had a good method. In the first case one could never have perfection, but a thorough horseman can make the animal he trains a machine that answers every demand, on the moment and precisely.

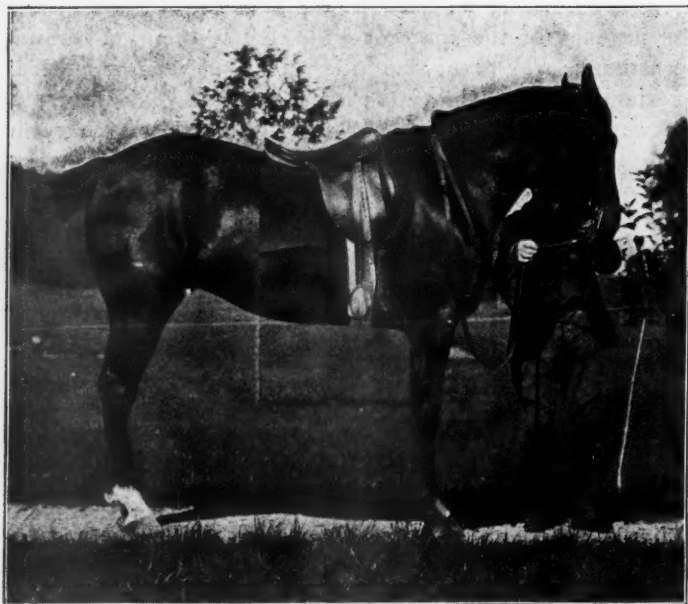
To obtain this coördination of the extremities a few lessons on foot are of great use, although a horse may be trained from the saddle or, as I have intimated, without having been mounted. The normal and usual process, however, is the following:

The essential thing is that the horse is to *go forward*. Even when the animal is made to back it must be induced to take a stride, or at least an inclination, forward before it is permitted to come to a rest. So the young horse is first ridden in the snaffle and made "to go into the bridle;" that is, to move forward freely against a tension upon the reins.

The horse having been brought "quiet to ride" in the snaffle is ready for the higher education; and, as has been said, more rapid advancement can be made by a few lessons with the man on foot than by his riding the animal as soon

as the double-reined bridle is employed; for no horse can be trained without bit and bridoon, unless it be in the snaffle alone in the hands of an exceptional horseman, when much reliance must be placed upon the assistance of the spurs in its control.

The following exercises are called the suppling lessons, and by them we overcome all resistances of the horse, whether active (intentional) or passive (due to conformation), so that the horse is pliant and obedient throughout.



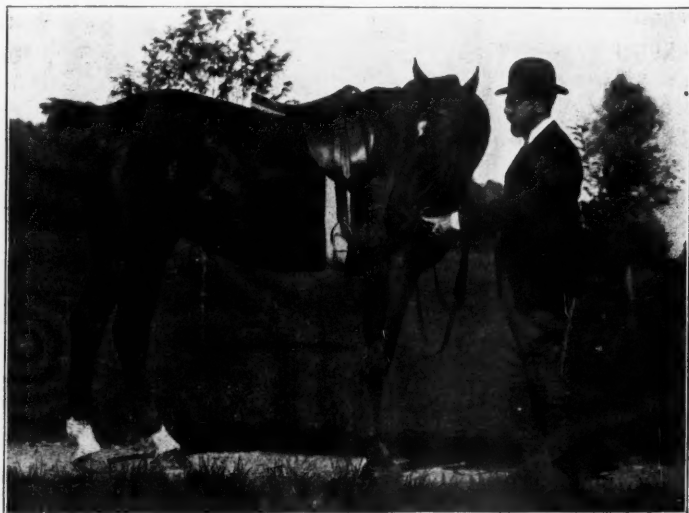
DIRECT FLEXION OF JAW AND POLL. (Anglo-Norman).

Photograph by M. F. A.

The first work is upon the forehand, or those parts of the horse before the saddle. The trainer standing in front of the horse should take a snaffle rein in each hand and elevate the head to the full extent of his arms, and then gradually and gently bring it back to such a height that seems to him the natural carriage of the head, demanding, without



violence, that the face should be about vertical to the plane of position. Then standing on either side of the horse near its shoulder, he should draw the snaffle reins away from the nose of the horse with one hand while with the other he should by gentle vibrations draw the curb reins, held under its chin, towards its chest, yielding the snaffle reins as the animal gives its jaw and drops its nose until the face is about vertical. When the horse curls the upper lip and has a perfectly pliant, but not lifeless, feeling upon the reins



BENDING HEAD AND NECK WITH CURB BIT.

Photograph by M. F. A.

the objects of these two lessons have been accomplished. In these exercises the face of the horse should not be drawn nearer to the chest than the vertical position mentioned, and the head should rather be higher than the natural carriage than otherwise. Regarding the next exercise I feel bound to say that it has aroused much opposition from those riders and trainers who think that the horse should be kept straight under all circumstances; but as I have found it so valuable in many ways and required for so many important movements,

and as I have the support of horsemen of the first force, I do not hesitate to recommend it as absolutely necessary. Standing at the head of the horse, on its right side, the man should grasp the reins of the curb bit near the branches and turn the bit by pushing with the right hand, while drawing the left hand towards him; in this manner he should gently and quietly bend the head of the horse to the left, and then by an equal, vibratory tension upon both reins procure the pliancy of the jaw and of the neck, as before described. In a similar way, the man standing on the left side of the horse should bend its head to the right. After it has been bent sufficiently to satisfy the trainer, the head of the horse should be placed straight, and the direct flexion of the jaw be demanded, and the horse should be encouraged in its obedience. At no time during these lessons should the horse be permitted to draw back without being brought to its original position and corrected by the voice, or be made to advance by a gentle tap of the whip upon the chest. It might be as well to mention here that, at this stage of its education, the horse should never be given punishment with the whip, or be struck on the hind legs. There are times when a sharp blow of the whip has a very good effect, say, when a horse pretends to shy, or gives a kick at whip or spur, but by a second application or by further strokes only mischief will follow, and the whip, instead of being an "aid," becomes a danger, for the horse is a determined fighter and will seldom "give in."

Two very simple exercises, with the trainer on foot, prepare the way for obtaining control of the hind quarters, or those parts of the horse behind the saddle. 1. Let the man stand on either side of the head of the horse and with the snaffle reins held under its chin keep the animal in place, as he gives some gentle taps of the whip upon the croup, so that the horse will carry the hind legs under the body. After one or two lessons the whip taps should be applied to one or the other hip, so that the horse will carry forward the right or the left hind leg as may be desirable. 2. To carry the croup about the forehand, let the man stand at the left shoulder of the horse, and in the left hand hold the snaffle

reins under the chin of the animal; then with the right hand let him give one tap, or more, of the whip to the left flank until one step is taken to the right. Gradually, step by step, the croup will be carried about the forehand, the left foreleg acting as pivot, the right foreleg being moved to conform to the movement by whip taps upon its under side. In a similar manner the horse should be made, by gradual lessons, to



CROUP ABOUT FOREHAND. LEFT FORELEG THE PIVOT.

Photograph by Dorothy Woods.

carry the croup to the left, around the right foreleg as pivot, the man standing on the right side of the horse, demanding each step singly and refusing to accept a voluntary movement.

During the period of these lessons which should occupy about half an hour each day, the horse should be exercised sufficiently upon the longe line, and by being ridden at the

walk and slow trot in the snaffle bridle. In the latter case the horse should be accustomed to the pressure of the rider's heels, by being collected for the changes of direction upon a closing of the rider's legs, and, at the turn, being made to conform to the arc of the circumference by an increased pressure of the outside heel; the direct rein, supported and its effects measured by the outside rein, demanding the turn, an equal tension upon the reins following its completion.

When the suppling exercises have resulted in a pliancy of the muscles and in a ready obedience to the whip taps the horse is to be ridden in the double-reined bridle, and by governing the extremities, between heels and hand, the rider will gradually produce the desired condition of *union and balance of the weights and forces*, and so be master of any movement—forwards, to the rear or to either hand—that he may wish.

When there is a perfect state of union and balance of the forces there can be no motion, and changes of position are made by one extremity yielding sufficiently to produce the effect sought. In violent actions the center of gravity is changed with a corresponding violence, as in the rapid paces or in leaping, rearing or plunging. But the schooled horse is instinctively obedient to the rider, and only those movements take place that he demands. Not only can the rider require from the trained horse of good conformation every possible movement, but faults of conformation may be corrected by an artificial carriage so that nearly every horse may be brought to move in easy, smooth and cadenced paces and motions. Indeed it may be stated that any horse with four good legs can be made safe and pleasant to ride, while the ideally formed horse must ever be awkward under a rider until it is given an artificial carriage.

## CHAPTER V.

THE SPUR—IN HAND—CLOSELY UNITED—THE HALF HALT—  
THE REINS.

Ordinarily the spur is a hindrance rather than an aid. A horse either shrinks from the sharp rowel or breaks away unless, as sometimes happens, it becomes a sluggard and has to be kicked along to keep it going. Properly employed the spur is an important, and in some cases is more important, than the bit; for example, in stopping a "bolt"; but in any event it is indispensable in the management of a horse, and in the use of a true horseman gives at the outset no more than a scratch, for after a few brief lessons the application of the sharp rowel is no longer required, as the side of the rider's heel or the pressure of his leg will be all that is necessary. The most nervous horse can readily be taught to bear and to obey the sharp spur with composure; and such a state of affairs gives an assurance of safety to the rider in many ways, for the horse will neither rush off upon an accidental scratch nor refuse to obey his demands. No one can give the proper application of the spur whose seat is not perfect, for no matter how violent the changes of the center of gravity may be the rowel should be used with such precision that, at most, only a scratch is made. But the trained horse would on occasion take and obey a severe use of the aid without resentment. During the early lessons under the saddle the horse should be taught to obey the heel of the rider, a tap of the whip upon the flank sometimes being required to enforce the pressure of the heel. After the horse has been accustomed to this form of the "leg aid" dull spurs may be used for a while. Then the horse should be ready to accept the sharp rowel, and upon the occasion of a lesson the rider should give a slight scratch upon one flank with the points and calm the horse by soothing words or by strokes of the hand. After an interval the other flank should receive a similar attack and the horse be quieted in the same manner. After a few such lessons the horse will not require the

sharp rowel, and the dulled spur or the side of the rider's heel will be obeyed with alacrity and precision.

The horses employed for the photographs in this work were ridden in spurs that had no sharp rowels, and I may say that blood had never been drawn from them by the spur.

The forehand of the horse being under the control of the rider, and the hindquarters being under the control of his heels, the man may readily demand such a union and balance of the extremities as he desires. A rule that must always be observed is that the effects of the heels should always precede those of the hand, for the hand must always have impulses from the croup to direct and manage.

The lowest form of collection in which lies safety and comfort is that which is known as "in hand," that is, when the motions of the horse are at least obedient to the rider's will.

If one mounts a horse, whose education has been carried as has been described, and quietly closes his legs against its sides before making a few vibrations of the reins, the horse will bring its bearers under the mass, drop its nose, yield the jaw, and show by the play of muscles under the rider that it is alert and ready to move off "in hand." A gentle yielding of the hand permits the horse to proceed in a walk, and then between heels and hand the rider should keep the weights and forces in the condition explained. Should the horse bear upon the hand and go too much upon its shoulders it should have the hind legs brought up under the body and the head slightly elevated. The horse should be ridden "in hand" at the walk, the trot and the slow gallops; the heels of the rider demanding sufficient impulses from the hindquarters, his hand directing and controlling these impulses, while between the heels and hand the proper balance and suppleness should be demanded.

A closer form of collection may be required and the increased impulses will go into increased action, when we shall have the shortened trot, the passage, or the school gallop of four beats. When the extremities are brought to a state of equilibrium, there can be no progress, and we shall have the

half-halt, the finished halt, or, if action is demanded, the dancing steps known as "the piaff."

The half-halt can be held but a moment, while the horse is light and one leg at least is flexed. When all the feet are on the ground the horse has lost its lightness and the halt is complete.

When the horse is brought to a halt, the rider's legs



HALF HALT. THE HORSE IS PREPARED TO GO FORWARD OR TO THE REAR.

Photograph by Dorothy Woods.

should not be withdrawn until the tension upon the reins has ceased.

There are a number of ways in which the reins of the double-bridle may be held. In riding a young or a difficult horse, I hold in the left hand the left curb rein between the

little finger and the ring finger, the left snaffle rein between the ring finger and the long finger, thumb uppermost; in the right hand, knuckles upwards, I hold the two right reins divided by the forefinger, the snaffle rein next to the thumb. In this way one has great control over the mouth of the horse by the direct reins, and the right reins can easily be shifted into the left hand.



UNITED OR SCHOOL GALLOP OF FOUR BEATS.

Photograph by Dorothy Woods.

In riding a schooled horse I carry all the reins in the left hand; the curb reins divided by the little finger, the snaffle reins divided by the long finger, the loose ends carried through the hand and held by the thumb which is uppermost and pointing between the ears of the horse. The right



hand lying on the ends of the reins, when not otherwise in use, and ready to assist the bridle hand.

There should not be a tension upon both sets of reins at the same time; that is, when the snaffle reins are in use the curb reins have no tension, and the snaffle reins are loose when the curb reins are in action. In riding with the left hand alone the turn to the left should be made by turning the thumb over the left shoulder of the horse and then by carrying the reins to the left. In turning to the right, the thumb should point towards the right shoulder of the rider and then the reins should be carried to the right. By this mode the danger of giving a wrong indication is avoided, and in demanding the gallop and the gallop turns and changes the direct rein controls the movements from the beginning, and there can be no confusion in the demands of the rider. When the right hand is free it should assist so that the direct rein acts in changes of direction, in beginning the gallop, and in the gallop turns and changes, because it is well to keep the horse accustomed to obeying the direct rein, and because the other rein can in this way better measure and control the effects of the direct rein.

In reducing speed and in coming to a stop the rider should increase the pressure of his heels and slightly raise his bridle hand and it must be borne in mind that the horse should always be brought to a finished halt by the action of heels followed by that of the hand, the tension upon the reins being loosened before the heels are withdrawn.

## CHAPTER VI.

## MOVEMENTS TO THE REAR.

A horse fit for riding should back freely and smoothly. The first lesson, and a very important one it is, should be given while the trainer is on foot. Placing the horse alongside of a wall the man should hold the snaffle reins under the chin of the horse with one hand and with the other hand give a few taps with the whip upon the rump to unite somewhat the extremities. Then by a repeated tap of the whip upon the rump, the trainer should produce an impulse and carry the flexed leg to the rear *one step*, immediately inducing a forward movement. Gradually, very gradually, the horse should be taught to take several steps to the rear always being induced to go forward before coming to halt. In other words, at the point where the backing ceases and the forward movement begins there should be no decided halt, but the body of the animal should drift like a pendulum, backwards and forwards, and then the stop.

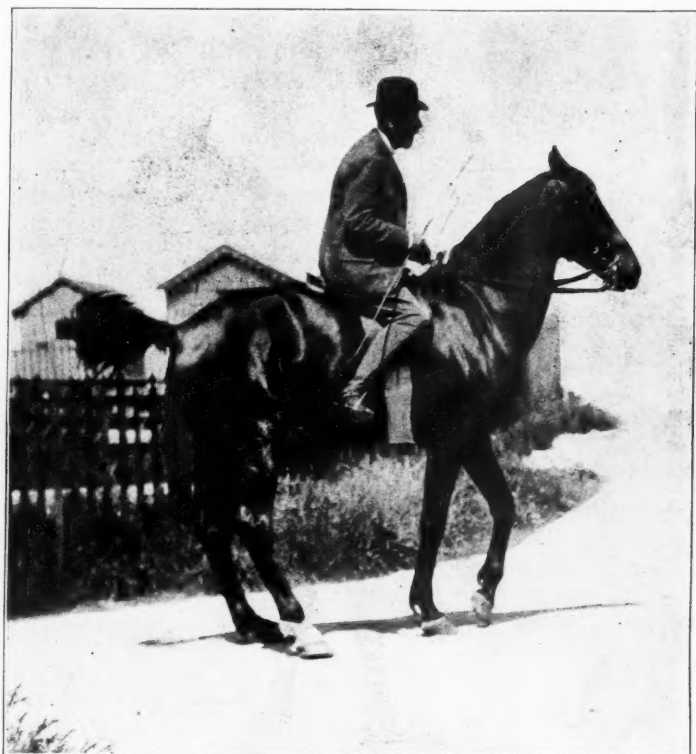
After a few such lessons the rider should mount, and after bringing the horse in hand, between heels and rein, he should increase the pressure of his legs until he feels an impulse when he should release his heels and carry back the flexed leg one step, then stop the movement by his heels and demand a step or two forward and finally a halt. As gradually as the rider's patience will permit, and a horseman should be fitted out with unceasing patience, the steps to the rear should be increased until the horse will move in a balanced and cadenced movement as far as may be desired; at least one step forward always being required before a halt.

Before many days the horse may be made to pass to the rear without any touch upon the reins, by the use of the spurs and the position of the body of the rider.

In backing, the turns and changes of direction may be made with the same precision as in the forward movements, the croup being turned to the left by the right spur and the right rein, measured and controlled by the left spur and the

left rein; and the croup is turned to the right by an interchange of spurs and reins.

I have often been asked by beginners how it is that the spur demands the forward movement, the halt, and the passing to the rear; all of which can be procured without the employment of the reins after a little practice.



BACKING WITH THE SPURS.

Photograph by Dorothy Woods.

This question may be answered by the statement that the spur requires impulses from the croup which first carry the hind legs under the mass. If the hand gives permission the horse moves forward under the impulses; if the forehand is

raised and the body of the rider is thrown back the hind legs come under the body and act as an elastic break or drag; if the impulse be caught and turned back before the movement forward is made the horse goes lightly to the rear.



BACKING WITH SPURS, WITHOUT TENSION UPON REINS.

Photograph by Mary Woods.

Now after this explanation it should be understood that during the lessons in which the reins are employed the horse,

which is a very observant animal, learns how the rider uses his body in the various movements and will be ready to obey the spurs, nor does it always require the action of the reins which never precede that of the heels.

It now occurs to me to explain the difference between a step and a stride. A stride is the ground covered by the mass from the moment any certain foot leaves the earth until it is again planted; example: in gallop right a stride is from the time the right hind leg drives the mass over the right foreleg into air until the same hind leg again comes to the ground. A step is the raising and next planting of any leg; for example: in beginning to move the croup about the forehand the horse may take one step with one of the hind legs, the other legs holding the ground.

## CHAPTER VII.

ON TWO PATHS—FOREHAND ON OUTER CIRCUMFERENCE OR  
TRAVERS—CROUP ON OUTER CIRCUMFERENCE OR  
RENVERS—PIROUETTE—REVERSED PIROUETTE.

*Travers* and *Renvers* are the movements upon two paths, the forehand following one path; the croup, slightly behind in the movement, following the other path, in such a manner that the horse is placed diagonally across the line of progress. When at the turns and changes of direction the forehand is on the outer arc of the circles we have the *Travers*. When the croup is on the outer arc of the circles in the turns we have the *Renvers*.

When in *Travers* the turn is so short that the inner hind leg of the horse acts as pivot, we have the *Pirouette*, or, if in the beat of the gallop, the *Pirouette-volte*.

When in the *Renvers* the turn is so short that the outside foreleg of the horse acts as pivot, we have the *Reversed Pirouette*.

In the lessons on *Croup* about *Forehand*, with the whip, we have prepared the horse to yield the croup at the pressure of the rider's heel, and these effects will now be employed for all the movements on two paths, whether *Travers*, *Renvers*, *Pirouette* or *Reversed Pirouette*.

The readiest way in which to begin the work upon two paths is to place the head of the horse near a wall, the forehand slightly in advance of the croup as regards the lines of progress, let us say to the right. The rider should then lead the animal along to the right, while with his left heel, its effect measured and controlled by the right heel, should press the hindquarters along as the body of the horse holds its diagonal position across the lines of progress.

In making the turn to the right, the croup on the inner shorter arc of a circumference should be slightly retarded so that at every point of the body of the horse shall hold its diagonal position. In head to the wall to the left the forehand

in advance of the croup, should, in a similar manner, be led on to the left by the reins, the hindquarters being pushed by the rider's right heel, its effect measured and controlled by his left heel. At the turns to the left the forehand being on the outer greater arcs of the circumference, the croup will be retarded, as in passing to the right. The effects of the



DRIFTING, FORWARD AND BACK. BALANCE BETWEEN SPUR AND REIN.

Photograph by Mary Woods.

rider's heels in these movements may be supported in the early lessons by light taps of the whip, and to apply the whip to the left flank of the horse the man may carry it behind his back, or he may shift the reins to his right hand and take the whip in his left. But as soon as the horse begins to un-

derstand the heel pressure the use of the whip should be discontinued.

Croup to the wall, or Travers to either hand, is done in exactly the same manner, the forehand slightly in advance of the hindquarters, but in Travers, as the hindquarters are on the outside larger arc or circle, at the turns, the forehand



USE OF WHIP IN BENDING CROUP ABOUT FOREHAND TO THE RIGHT

Photograph by Dorothy Woods

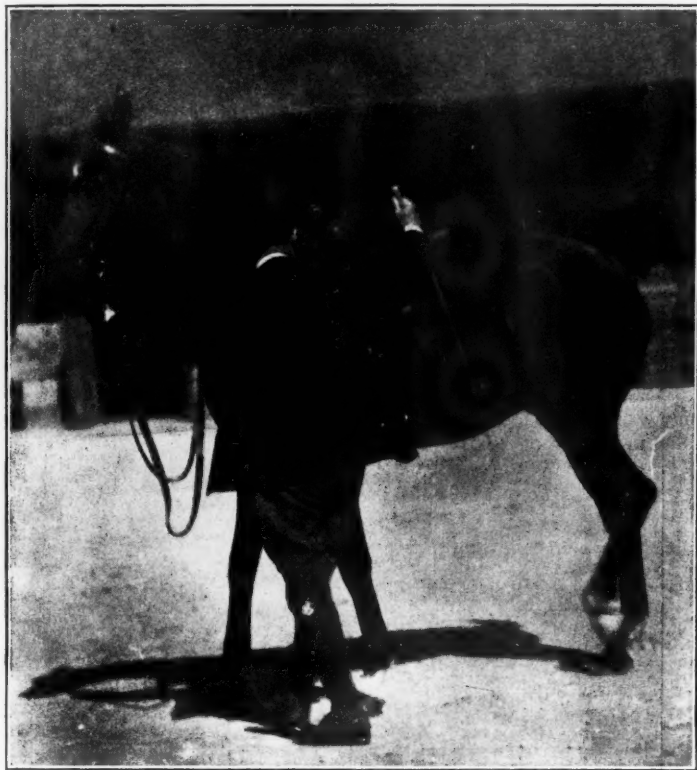
must be so retarded that the diagonal position of the body of the horse shall be preserved at every point on the turns or circles.

These lessons should be practiced at the walk until the horse is quite perfect in both Travers and Renvers in that



pace, then it should be made to pass in two paths in the trot and finally in the shortened gallop.

As has been said when the turns, in the walk, in the trot or in the gallop, are so abrupt that in Travers the inner hind leg acts as pivot we have the Pirouette. When the turns



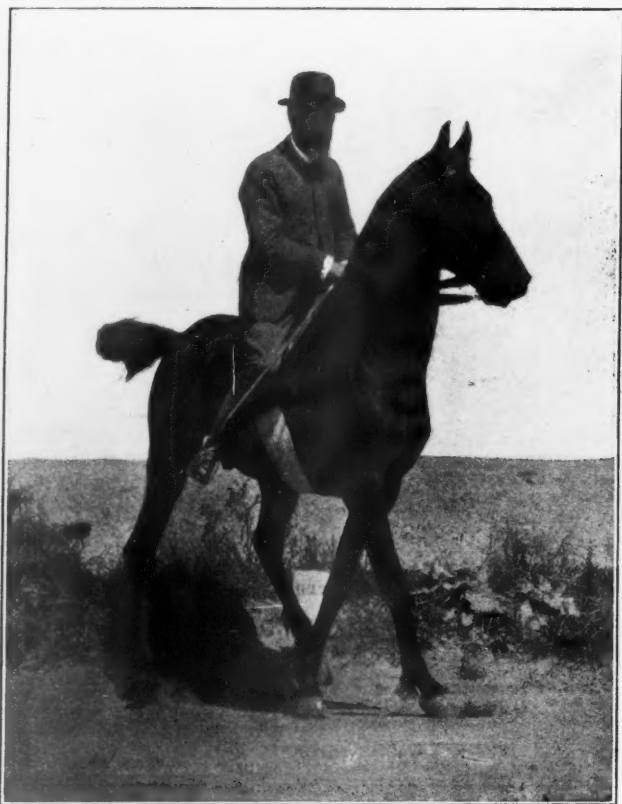
USE OF THE WHIP IN TRAVERS. (ANGLO-NORMAND).

Photograph by the Author.

in Renvers are so abrupt that the outer foreleg acts as a pivot we shall have the Reversed Pirouette; that is, when the croup passes to the right about the left fore leg as a point we shall have the Reversed Pirouette to the right. In a similar manner, when the croup passes about the forehand to the left so

that the right foreleg acts as pivot we shall have the Reversed Pirouette to the left.

In all work in Travers and in Renvers the head of the horse should be slightly bent in the direction of progress; so



RENVERS. ON TWO PATHS TO THE LEFT.

Photograph by Dorothy Woods.

that in the Reversed Pirouette the horse should look towards the croup as it goes about the forehand.

All of these movements upon two paths, including the pirouettes, are of the highest importance to all of those who

are to be considered as horsemen, and to mounted soldiers they are absolutely essential, for the trooper who has the



PIROUETTE. RIGHT HIND LEG THE PIVOT.

Photograph by Dorothy Woods.

readiest horse in turns and wheels has his opponent in his hands.

To those who argue that the bending lessons are not only useless but harmful, I can only say that I have found that the more supple and pliant I can make my horses the more readily I can keep them straight when it is required; and the precision with which all the movements were made,



REVERSED PIROUETTE. LEFT FORELEG THE PIVOT.

Photograph by Dorothy Woods.

whether straight or bent, is proved by the scores of moment photographs of half a score of horses, printed in "Modern Horsemanship," in "Riding," in "The Cavalry of To-morrow," in this book, and in my various magazine articles, for in each picture the position is exactly right.

[CONTINUED.]

## NOTES ON A TRIP THROUGH JAVA.

BY MAJOR W. C. BROWN, THIRD U. S. CAVALRY.

UPON arrival in Batavia I called upon the American consul, who arranged for me to make my formal official call the following morning upon His Excellency, Lieutenant General M. B. Rost van Tonningen, commanding the military forces—about 30,000 men—in Netherlands India.

The next morning I met the consul by appointment at the Concordia Club, which is the military club of the city, and, being quite a palatial establishment, is well calculated to favorably impress visitors.

We then proceeded to the residence of Gen. Rost van Tonningen, where we were received most cordially, and upon my expressing a desire to see something of the cavalry and native troops, it was arranged that I could see that same morning a squadron, part white and part native, stationed in Batavia. It was also proposed that I should visit their remount depot at Padalarang and principal cavalry station at Salatiga, the former about six and the latter about twelve hours by rail in the interior and in a salubrious climate about 2,000 feet above the sea level.

The general said that they had natives and whites in the same organization, as by this means better results were secured than where they were kept separate. He spoke very fair English, an accomplishment which I understood was quite general with their officers.

The general then arranged that his deputy should return my call the same evening.

We then made a brief call upon Major W. E. A. Burton, His Excellency the Commander in Chief's deputy, and I proceeded to the barracks of the squadron in question, they having been advised over the telephone by the general of my coming.

A squadron, I learned, is composed of one captain, four lieutenants, 140 enlisted men and 128 horses. Forming a part of each squadron is a platoon of two Maxim machine guns manned by nineteen troopers.

The squadron was mounted on New South Wales Australian horses of very good quality, about the same grade of remount as we have recently been purchasing in Australia, and of a height from  $14\frac{1}{4}$  to  $15\frac{1}{2}$  hands, the majority being small horses, which apparently suit their purpose better than a taller one, so far at least as concerns their natives, who are but little taller and heavier than our Filipino native scouts.

The horses cost, laid down in Java, £41, or about 500 guilders (\$200) each. They have a purchasing agent in Sydney, Australia, who has the contract to supply their annual requirements at this figure. The contract is revokable only upon giving eighteen months notice.

A board of officers visits Australia annually and passes on the horses presented for their inspection by the contractor. After a horse has been thus accepted the government assumes all risks, although the cost of transportation to Java is borne by the contractor.

At the inspection of barracks and stables the following was noticed which seems to be worthy of mention.

*Arms.*—Carbines of Manlicher pattern, five cartridges in magazine, calibre  $6\frac{1}{2}$  millimeters. This carbine is rather shorter than the Krag carbine which we have recently discarded and is carried on the back of the trooper.

The sabre is almost a duplicate of the sabre, with bronzed blade and hilt and leather covered scabbard, of which we have recently issued a few in the Philippines for trial and experiment. This is intended as a field weapon. Officers on ordinary duty carry a nickel plated sabre similar to our own.

*Equipment.*—Canteen of aluminum covered with felt of German pattern, capacity about the same as our own. This form of canteen was favorably reported upon by the writer some thirteen years ago, and he still regards it as more durable, lighter, more cleanly and better shaped than our canteen. Having a removable felt cover the canteen can, from

time to time, be taken out and thoroughly cleaned by being placed for, say, twenty minutes in boiling water.

*Spurs.*—Attached permanently to a black shoe, which is a very poor one both as to pattern and quality of leather. The arrangement does not strike one favorably.

*Pack.*—Spare clothing is rolled in a piece of brown canvas about three feet square. No shelter tent is carried.

The squadron commander had less than an hour's notice of my coming. As I found the arms and horse equipments in excellent condition, it may be assumed that this is their habitual state.

The Veterinary Hospital was visited and appeared to be well equipped, scrupulously neat and clean and provided with an operating table—a low platform heavily padded and covered with leather.

The Veterinary Department was in charge of three officers—a major, captain and lieutenant. Evidently the services of this important branch are better appreciated than in our army.

The squadron has a small canteen with separate room for non-commissioned officers.

Non-commissioned officers are, in some instances at least, provided with separate rooms in barracks.

The bunks for native troops are little more than tables about six feet square, each providing sleeping space for two soldiers.

The arrangements for cooking were almost identical with those of the Filipino kitchen with which we are all familiar.

The pay of the native soldier is  $\frac{1}{4}$  of a guilder (10 cents U. S. currency) per day. These native troops comprise about two-thirds of the army of Netherlands, India. The large proportion is explained on the score of economy. They seem to have their full share of field service in their efforts to conquer the Achinese in Sumatra, who have been waging a guerilla warfare for about thirty years, and no prospect of an end to it.

Before leaving Batavia, Major Burton, by General Rost van Tonningen's direction, gave me a general letter of introduction to the commanding officers of all troops in Java,

besides making special arrangements for my reception at the remount depot at Padalarang.

Our consul gave me a letter of introduction to the Adjutant of His Excellency, the Governor General of the Netherlands, East Indies, at Buitenzorg, whence I proceeded from Batavia.

I was received very cordially by His Excellency, who, learning that I was going to Djokjakarta and other places to the east, had his secretary give me a letter of introduction to the various resident or local governors, and suggested at the same time that I might find it interesting to call on the native sultan or regent at Djokjakarta. These regents, he laughingly remarked, are self styled "emperors," but have but little power.

He invited me to dine at the palace that evening and sent a carriage to bring me to the dinner and return me to the hotel at its conclusion. The dinner was quite an elaborate full dress affair, and I was pleasantly surprised at finding English quite generally spoken by the guests as well as by my charming host.

The term of service of officials, both civil and military, in the colonies is ten years, when they are entitled to a year's leave on half pay.

I was told that the pay of officers in the Colonial Army is about three times that in the home army in Holland. Cavalry officers are required to own their mounts, purchasing them usually from the government on the installment plan. Those officers' chargers which I saw were of a very high class.

#### VISIT TO DJOKJAKARTA.

My next visit to a military establishment was at Djokjakarta, where the garrison (infantry), consisting of one company of native Ambonese (considered their best native soldiers), and one company of white (European) troops, was quartered in an old fort.

I called on the Commanding Officer, Lieutenant Colonel Schellheim, who returned my call a few hours later and



made an appointment with me for the following morning to see the drill of the Ambonese and inspect the barracks, etc.

At the drill the Ambonese were dressed in dark blue uniform, with a stiff black helmet with bright metal trimmings, black shoes of a poor quality of leather. This impressed me as being decidedly out of date, and must have been most uncomfortable to the wearers. These native soldiers were most attentive at their drill, however, showing a creditable amount of interest in their work.

Their drill on that particular occasion was bayonet exercise with Manlicher rifle. They also gave a good exhibition of an advance on an enemy by rushes.

These men were evidently kept under good discipline; their rifles were in excellent condition, but their equipments were poor and out of date.

The hospital was next visited, and was found to be in excellent condition and, so far as I could see from a non-professional standpoint, the establishment was run on lines which were quite up-to-date, considering the means at their command. The surgeon stated that requisitions for medical supplies were promptly filled.

#### TARGET PRACTICE.

I was informed that about 100 rounds per man per year were spent in target practice, and I saw here, as in Batavia, an appliance for assisting in the aiming and sighting drill worthy of mention.

Instead of a bag of sand or oats resting on an improvised tripod of tent poles, as with us, the rifle rests on two tripods in a bed or groove at the head of each. The rear tripod is provided with screw movements for both horizontal and vertical deviation.

This arrangement permits of more rapid and more accurate work than our improvised tripod.

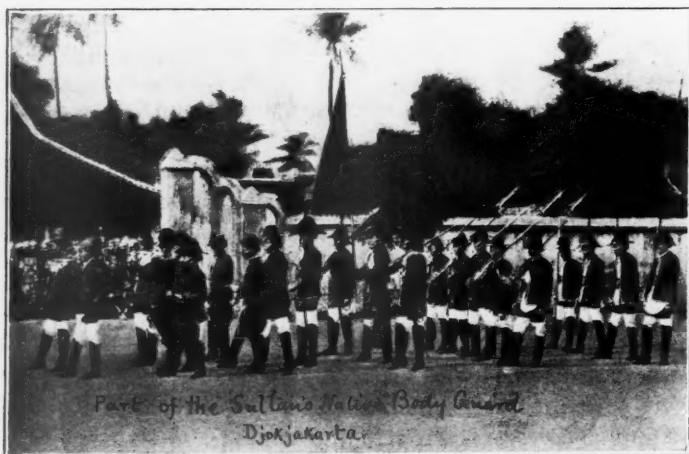
A reflecting instrument is slipped over the rifle just in rear of the rear sight enables the instructor to ascertain by a side observation whether or not the recruit is aiming correctly.

I was told that the men had from two to three hours per day of practical instruction, and one of theoretical.

Guard duty averages four or five nights, with a minimum of three nights in bed. When troops go into the field they have no regular transportation, but carry three days' rations of fish and rice on the person.

In barracks white soldiers have coolie "strickers," two or three clubbing together and hiring one for about ten cents, U. S. currency, per day.

The men sleep on iron bedsteads without springs, on mattress and pillow stuffed with straw, changed monthly.



The letter of introduction to the resident or local governors, given me by direction of His Excellency the Governor General, enabled me to visit the establishment of the native sultan or regent at Djokjakarta which, while very interesting from the standpoint of the tourist, has little to recommend it as a source of military information.

His native guard is armed with muskets of calibre 50, model of 1842, spears, swords and krisses. Part, at least, of his native guard is mounted, but the men live at their homes and assemble only as occasion requires.

The Netherlands India government has, however, a troop

of about fifty white cavalrymen which is pretty thoroughly up-to-date and splendidly mounted, quartered in the Sultan's compound.

As is well known, the native Sultans, while drawing large salaries and commanding extensive establishments, are virtually prisoners and dare not even leave their compounds without permission of the residents.

#### VISIT TO SALATIGA.

From Djokjakarta, I proceeded to Salatiga (2,000 feet above the sea) the headquarters of three of the five squadrons comprising the one cavalry regiment of the Colonial Army. Here I was shown horses (all Australian) which had been here for one, two and three years.

Upon receipt of horses from the remount depot at Padalarang they are kept in the depot squadron at Salatiga for nearly a year before being put to full duty with troops.

From what I could see, the horses were well trained gentle and in excellent condition. Java is a mountainous country and requires a small, compactly built, "nuggetty" horse. Major Daniels, the commanding officer, was quite emphatic in expressing his preference for this style of horse.

They have good, firm gravel roads in Java, which are rather hard on the horses feet, and they are kept shod all around and troopers carry four horseshoes and nails with them on the saddle in the field.

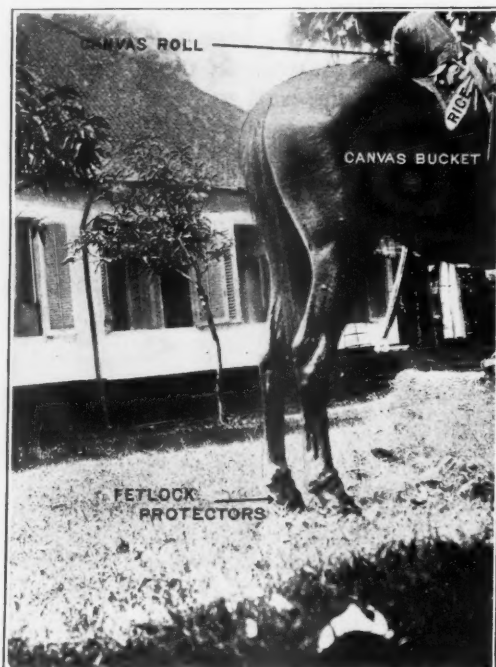
The floors in the stables are of cement. Arms and equipments here, as at Batavia, are in excellent condition.

The natives are apparently fair cavalrymen, but do not look to be as good horsemen as ours. The sword being their native weapon, Major Daniels stated that they did well at mounted fencing.

In these squadrons the natives and whites seemed to be mixed indiscriminately. The saddle blanket is thick and soft, and I saw no sore backs or few evidences of there having been any such.

They have no picket pin, but carry a lariat — rather inferior to ours — rolled.

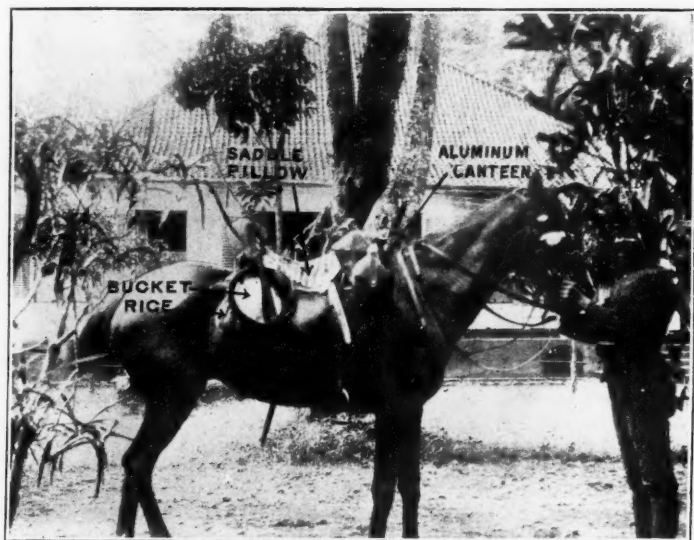
When a horse is lariated out, the one great source of danger is that he will become entangled with the lariat caught in the fetlock joint of one of the hind feet and in kicking to free himself, while thus entangled, may ruin himself in a few minutes. To provide against this the trooper carries a pair of leather shields which, when the horse is to be lariated out, he buckles about these joints as shown in the illustration.



In the Bannock campaign in 1878, the writer was in the field from May to October, marching some 2,600 miles. Hay or grain was rarely obtainable, the conditions being such that it was necessary to subsist horses by grazing alone. The lariat was used almost exclusively—rarely the side lines. We had, however, a considerable number of horses “burned” at the fetlock. The desirability of just some such

device as the Dutch use was noted by the writer, and subsequently reported upon by him. I desire to renew my recommendation as to this, as well as to suggest the omission of the heavy iron picket pin from the list of equipments carried by the trooper.

In their practice marches they evidently cover quite as much ground as we do, for Major Daniels informed me that he had marched from Batavia to Salatiga, 600 miles, in sixteen days, and back through the mountains in twenty-two days. He also spoke of making the march to Samarang, thirty-five miles, in one day.



On the morning of my visit one of the squadrons was engaged in executing a tactical problem almost identical with some of those which we have recently carried out at Camp Stotsenberg, with the difference, however, that I noticed that the squadron commander had a detailed topographical map in colors to work by.

They are still working to perfect the military map of Java, and I talked with a couple of officers who are engaged

on this duty. Their work, they told me, was filling in details—the skeleton has already been made—and the results of their work when completed will be published.

It is worthy of note that I found in one of the squadrons that one man was provided with dynamite, fuse, etc., for making demolitions, something which all of our cavalry is as yet not provided with. Another non-commissioned officer had in his saddle bags a sketching case with colored pencils. Two men in each platoon are provided with heavy wire cutters.

Other tools carried in the squadron were a small pick, a sort of grub hoe and a number of small hand grass cutters used by the native troops in cutting grass for the horses of the squadron.

At my request Major Daniels sent a native trooper over to the hotel that I might photograph him in various positions with his equipments. The photographs, with the notes thereon will, it is believed, give the reader a clear idea of the equipment of the native trooper of the Army of Netherlands India.

*Contents of Left (near) Saddle Bag.      Contents of Right (off) Saddle Bag.*

1 shoe (man's).  
1 soft visorless cap.  
Lariat.  
Comb.  
Cleaning materials.  
Screw driver.  
10 cartridges.

1 shoe (man's).  
Horse brush and curry comb.  
Cleaning cloths.  
Pair fetlock protectors.  
12 horseshoe nails.  
Scissors.  
Knife, fork and spoon.  
10 cartridges.

Four horseshoes are carried—two on each side—in leather pockets.

The canvas bucket, as shown in the photo on the off side, is carried by each seventh man.

On the seat of the saddle is a padded saddle pillow and underneath this is a cotton blanket.

Thirty cartridges are carried in a box on the belt of the trooper in addition to the ten in each saddle bag—fifty in all.

In the front of the saddle is carried a sickle or grass cutter.

On the near side in rear of the saber is carried a pair of heavy wire cutters, shown in the illustration.

The back pack (brown canvas roll) contains:

One coat, serge.

One trousers, cotton—indigo color.

Shirt, drawers and towel.

#### VISIT TO PADALARANG.

From Buitenzorg I proceeded to Padalarang, being met at the railway station by Lieutenant W. J. E. van Reinsdijk



who brought me to the quarters of Major W. Groeneveld, Chief of the Remount Depot and Government Stud, whose guest I was during my stay there.

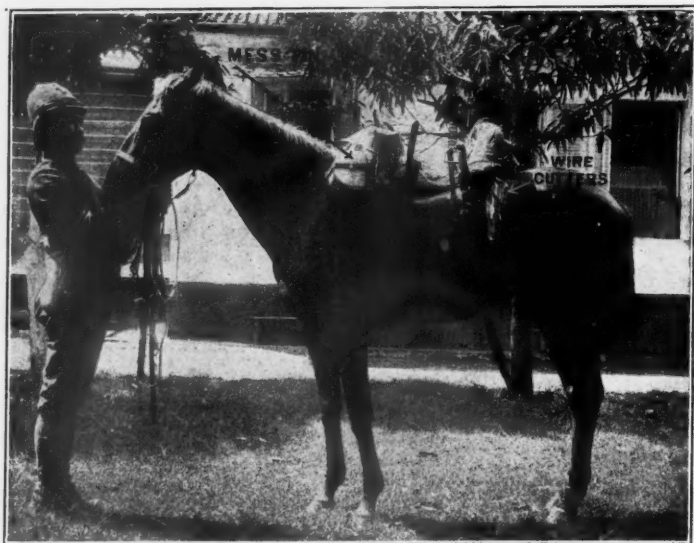
Accompanied by these officers I made the rounds of the stables of the remount depot, where they have some 280 horses that had been there three months or longer.

All horses purchased in Australia (about 250 each year) are sent to Padalarang for training. Their ages when received vary from three to five years and height from 1.47 M.



to 1.58 M. (about  $14\frac{1}{4}$  to  $15\frac{1}{4}$  hands) the price delivered in Batavia being for remounts, 500 guilders (\$200), and for gunners 560 guilders (\$224). They also had a number of pack horses on hand.

Horses are kept here for the first three or four months simply to get in condition; their exercise then starts, first trotting and later (about twice a month) at a canter. They are kept at this for about three months. The track around which they are driven is about one-half to three fourths of a mile in circumference and oval shaped.



They are then saddled and for about two weeks given exercise in a small riding school with the saddle, that they may get accustomed to the feel of it. The native soldier then puts his weight in the stirrup (but does not mount) and continues this for a number of days, when finally he slips over into the saddle. The horse is then ridden daily for about a month by the native soldier.

In this way the oldest horses are kept at the remount depot for about six months and are then transferred to the



depot squadron at Salatiga for their military training, which requires from ten to twelve months.

The younger horses are kept at the remount depot for a full year or eighteen months, as horses are only sent to the depot squadron at five years of age.

The horses at the remount depot are sheltered in small stables having a capacity for twenty horses, each under charge of a native soldier and a native civilian employee — the latter at eight guilders (\$3.20) per month.

These stables have a hard wood frame, sides of suale, roof of tiles, are about sixty-five feet long by thirty-two and one-half feet wide and cost about \$200 each. Attached to each stable is a paddock about six acres in extent divided by a fence, so that the horses may be changed from one to the other about every two or three weeks.

The forage ration is about five kilograms of paddy and twenty-five kilograms of grass per day, and they sometimes give them an oil cake from a native bean (grown underneath the ground) from which the oil has been pressed. They are also making a trial of feeding on dry hay, as they think too much green food is not good for the horses. Their forage costs them an equivalent of about 12 cents (U. S. currency) per day. They raise practically all their green fodder and are starting to raise alfalfa, but that, as yet, is an experiment and not altogether a satisfactory one. They are also experimenting with a sort of Guinea grass which promises good results. A grass called Bengal grass is also regarded favorably.

A great difficulty with which they have to contend is from lack of lime in the soil and hence in the forage. To counteract this they are now fertilizing the soil where their forage is grown with powdered limestone. This promises good results.

Labor here is very cheap. They have adopted the plan of working men from 6 A. M. until noon, and for this six hours' work the native gets an equivalent of six cents, U. S. currency—a cent an hour.

They count that their horses will last them about four years. Their stony roads, food, climate, severe exercise, etc.,

wear horses out very rapidly. They are by no means satisfied with the results which they are getting. It may be in the horse itself, or in the climate, food or treatment.

Horses at the remount depot are weighed every month. They had twenty pack horses on hand at the time of my visit. The load which they assign to each pack horse is 150 kilos. They have found it difficult to get horses strong enough, low enough and yet with sufficiently short backs for pack horses.

One of the officers remarked that he thought the Australian horses generally had not good loins, and therefore do not stand severe gymnastic training.

In quality, it seems to me that the horses I saw were about the same (no better and possibly not quite as good) as those we have recently been buying in Australia. Their prices should not be so high, because these horses average considerably less—an inch or more—in height.

The remount depot has been in operation some twenty years, although established at Pedalarang only five years ago. Major Groenevald has been in charge of it for eleven years.

#### GOVERNMENT STUD.

They have here three stallions of the Timor breed and fifty Timor and ten Australian mares. The purpose of the stud, which has been in operation four years, is to raise stallions for the natives of the country to breed from and increase the size and quality of the native pony. They work to increase the size by using, first, big stallions of the same breed; and, second, by later on crossing with Arab stallions. They report that the results are very satisfactory in increasing the size and quality, but they have had a considerable trouble with osteoporosis or osteomalæie (big head), thought to result from lack of lime in the food. They say that they have this trouble in all their colonies, particularly in the tropics.

I was shown one horse so afflicted, leaving a hard, permanent and painless swelling or enlargement of the face. The only remedy seems to be that there should be lime in

the fodder. The fodder grown in a limestone region will naturally be satisfactory. If the soil contains no lime, it must be fertilized with it.

SURRA.

Upon inquiring as to their experience with surra, their theory is that it is transmitted by a fly which can give surra even though the horse has not a scratch.

When surra is to be feared, horses are turned out to graze at night only and are not tied out on the picket line in the day time. A smudge is made about the horses in the day time to keep the fly away.

## CAVALRY REORGANIZATION.

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BY CAPTAIN ROBERT E. L. MICHIE, TWELFTH CAVALRY.

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**I**N a great commercial country, detached from the world powers, the people at large become so completely absorbed in private enterprise during times of peace that the needs of a regular army and the necessity of having it always in a state of readiness for emergency is largely lost sight of.

Our nation has so far been uniformly successful in all its military conflicts and it has not been necessary for the spur of disaster to call forth patriotic sacrifice for reorganization and training in time of peace.

Without this probably the genius of Scharnhorst would have availed little in reorganizing the Prussian Army after its disasters a century ago. Without a somewhat similar incentive, after the Chinese-Japanese war, that most excellent Japanese military organization would not have come into being for the recent great war in the Far East.

As a civilized nation, we turn from war with horror so long as peace is possible with honor, but in maintaining honor and in averting war preparedness is essential. The aim to be desired is to see means made available, so that our nation may find in the hour of emergency that immediate response from its trained military forces which will afford strength and security to all in the satisfactory knowledge of their ability to cope with whatever emergency presents itself.

It is our national boast and pride that we require only a small regular army. Such being the case, the greater is the necessity for some "reserve" force for all arms as the cornerstone upon which the real effectiveness must rest, and the fountain from which to supply subsequent needs.

It is an indisputable fact that the most effective peace organization of every army unit would be that which approaches most closely the organization of that unit when on

a war footing were there not economic and political questions which rule otherwise. For this reason the peace organization of all regular armies is greatly reduced below the strength provided for war purposes. For the latter purpose the great European continental powers provide from three to three and one-half times their peace establishments, by maintaining a reserve system which supplies a force that has previously served in the regular establishment and which may subsequently become engaged in civil pursuits, rendering military service only as emergency requires. These powers require universal military service with certain exemptions—so many years with the colors and so many with the several reserve forces.

The United States alone of all great nations reduces the regular military establishment to about one-half the field service or war strength by skeletonizing *all* units, *regiments*, *battalions* and *companies*, and makes no provision for the supply of effectives necessary when such units are called into service. Such a policy can have nothing to commend it on either economic or political grounds, and if continued, must eventually prove disastrous to our nation in its shortsightedness. That it has not done so before is undoubtedly due to our isolation from other great powers and to our great latent resources in men and money.

In the great international questions which this nation will in the future more than ever be called on to consider, an effective naval and military force will be factors more important than latent resources.

That great English soldier, Field Marshal Earl Roberts, aptly says:

"A terrible lesson awaits the nation whose soldiers find themselves opposed to equally brave but better trained opponents on the field of battle. No amount of money, no national sacrifices will then avail, for modern warfare moves fast and time lost in peace can never be made up during the stress of campaign."

Russia sadly learned this at the battle of Mukden. With an army of from 300,000 to 400,000 men, a strength perhaps

twenty per cent. less than her adversary, well supplied, and in some respects better armed, this mighty force was driven from thoroughly fortified positions with approximately thirty per cent., or over 100,000 men killed, wounded or captured. So far as such disaster can be explained, we may say it was due to the greater unity of command, the superior training of the Japanese officer and soldier, with a completeness of detail, prepared in advance, for every undertaking, great or small. Both the Russian and Japanese soldiers are equally brave, as attested on many battlefields, and both chieftains were possibly equally great commanders.

Assuming that it is not a desirable policy to maintain a standing army much in excess of that now authorized by law, and that our first reliance for offense and defense will properly be our Navy, economic reasons as well as a necessary provision for national defense require us to make our military establishment the most effective for its size in the world and capable of the greatest immediate expansion compatible with the retention of its effectiveness.

#### THE CAVALRY REGIMENT.

The limits of this paper will not permit me to go into the historical employment of cavalry. Owing to the use of smokeless powder and the continued improvements in rifled arms, war is daily becoming so scientific that all details must be worked out in advance of battle and every possible emergency provided for. A battle once entered into, little more than supervision and the employment of reserve forces can be controlled by the commander.

At Waterloo the armies engaged fought over an area of about three miles in length by about one and one-half in depth, the battle lasting from 11:30 A. M. to 8 P. M. Napoleon and Wellington were approximately within about a mile of each other the greater part of the time and both were capable of directly controlling the movements of their troops. In our Civil War (1861-'65) the range and precision of fire-arms had improved so little that conditions on our great battlefields were not materially changed. While in South

Africa the British on various occasions, with less than half the number of troops engaged at Waterloo, covered a front of more than twenty miles. In Manchuria, with forces vastly greater, the Russians and Japanese occupied fronts at Liao Yang, Shaho and Mukden of from thirty to one hundred miles, and engaged in continuous combats covering from ten to eighteen days; the headquarters of the commanders being from ten to twenty miles in rear of their line of battle. Communications under these conditions can only be kept up by field telegraph, flag, heliograph and mounted orderlies as circumstances permit. Even with the most effective use of such means of information, the combat once entered upon, tactical changes of troops can seldom be made by the shifting of troops from one part of the line to the other.

Great opportunities, however, are offered for the use of a strong reserve of thoroughly trained cavalry of the American type. That the Japanese did not make more use of such a force was undoubtedly due to their deficiency and inefficiency in this arm. That they did not seriously suffer on this account was due to the great effectiveness of the Japanese infantry and artillery and the absence of a thoroughly efficient opposing cavalry force of this character.

In addition to duties relating to reconnaissance, scouting, screening and raiding, generally recognized as exclusive functions of cavalry, changed conditions of modern warfare will employ it for certain vital acts on the battlefield, viz: The rapid reinforcement of important points for either offense or defense, as well as the seizing and holding of strong positions in advance or retreat.

Some military writers improperly use the term "cavalry" to mean troops who fight habitually mounted, and "mounted infantry" for troops who fight both mounted and dismounted. A more correct application of the term "cavalry" is to apply it to the latter named force, exemplified in our American trooper, and the term "mounted infantry" for foot troops who use the horse only as a means of transport. Early's mounted forces in the Valley claim that their defeat was chiefly due to the fact that Sheridan's cavalry, unlike them-

selves, were armed and trained for mounted as well as dismounted action.

It was the absence of Confederate cavalry and the presence of Union cavalry under Buford which made it possible for Reynold's infantry to seize and occupy that magnificent defensive position which insured victory to the Union arms at Gettysburg, and it was such cavalry which, under Sheridan, culminated that victory at Appomattox.

Cavalry, to be effective in its many capacities, must in addition to its mounted training, be the equal in all respects when dismounted to infantry, man for man and arm for arm. Our American soldier is fully capable of such qualification, but he cannot be improvised, and to so qualify him the fighting units (troop and squadron) of which he is a part must be maintained in peace on the same status they will be used in war, with a *reserve of men and remounts* provided for war contingencies.

#### ORGANIZATION.

\*The cavalry of the various great powers is organized as follows:

##### GREAT BRITAIN.

"Regiments consist habitually of four service squadrons. The regiments recruit for themselves, recruits and remounts both being trained at regimental headquarters when on home service. When ordered on colonial service a depot detachment is established to receive and train recruits, horses being supplied at the station where the regiment is serving. The peace establishment of a regiment at home is 715 men and 515 horses."

##### GERMANY.

"The German cavalry is of four different kinds: Cuirassiers (heavy), lancers (medium), dragoons and hussars (light). Each regiment consists of five squadrons, one of which is broken up in war time and forms the depot squadron. The peace establishment is 701 men and 667 horses, that for war comprises 668 men and 662 horses. The squadron numbers

\*The Army Book for the British Empire.



in peace time 139 men and 133 horses (including twelve remounts), against a war strength of 150 combatant men and horses."

## FRANCE.

"The French cavalry consists of cuirassiers, dragoons, chasseurs and hussars with a few special African regiments. The system of four active and one depot squadron obtains as with the Germans. The strength of a squadron on a war footing is 149 sabers and horses, and of a regiment 612 men and horses."

## AUSTRIA-HUNGARY.

"In Austria-Hungary we find dragoons, hussars and lancers, all medium. Each regiment consists of six field squadrons, and the cadre of a depot (Ersatz) squadron. The total combatant strength of each squadron is 171 of all ranks with 150 horses and of a regiment, 935 sabers."

## RUSSIA.

"The Russian cavalry requires a longer notice. It has two distinct classes, the regulars and the Cossacks. The regular cavalry is subdivided into cavalry of the guard and of the line. The former comprises cuirassiers, lancers, hussars and dragoons, whilst the line cavalry are all dragoons, trained to fight on foot, and to look upon the horse simply as a means of rapid locomotion. These carry a rifle and bayonet, the rifle similar to and only somewhat shorter than the infantry weapon. The Russian regiment now consists of six squadrons, with a strength of 36 officers and 859 men and horses, and, in addition, a depot or reserve squadron. Each squadron numbers 5 officers, 143 combatants and 143 horses. The Cossacks are commonly looked upon as an irregular force, as were their prototypes the Parthians. Their system and terms of service are special, but recently their individuality has been somewhat merged by the inclusion of Cossack regiments in the regular cavalry divisions. The Cossack is armed with the lance as well as the carbine."

## COMPARISON OF DEPOT SYSTEMS.

"It must be fully recognized that on the outbreak of war the cavalry must be prepared to take the field on the spot, and that to do so with an effective force and ranks filled up the non-effective men, such as recruits and sick, must be transferred to some body which will in return replace them by effectives. In Germany and France, immediately on mobilization, one of the squadrons, and in Austria the depot cadre become depot squadrons, and the necessary transfers both in men and horses are made with great facility on the spot. These depots now become feeders of the regiment; men and horses becoming non-effective through the rapid waste of war are replaced by new hands and remounts from the depot, and the regiment is in all respects self-supplying. In Russia, a reserve squadron exists for each regiment, independent of and separated from it, consisting of about 150 men and 160 horses. This squadron, both in peace and war, is used as a remount and training depot."

## UNITED STATES.

Our cavalry organization is fixed by the Act of Congress approved February 2, 1901, as follows:

That from and after the approval of this act, the Army of the United States, including the existing organizations, shall consist of fifteen regiments of cavalry \* \* \*.

Section 2. That each regiment of cavalry shall consist of:

- 1 colonel,
- 1 lieutenant colonel,
- 3 majors,
- 15 captains,
- 15 first lieutenants,
- 15 second lieutenants,
- 2 veterinarians,
- 1 sergeant major,
- 1 quartermaster sergeant,
- 1 commissary sergeant,
- 3 squadron sergeants major,
- 2 color sergeants,
- 1 band, and 12 troops organized into three squadrons of four troops each.

Each troop of cavalry shall consist of :

- 1 captain,
- 1 first lieutenant,
- 1 second lieutenant,
- 1 first sergeant,
- 1 quartermaster sergeant,
- 6 sergeants,
- 6 corporals,
- 2 cooks,
- 2 farriers and blacksmiths,
- 1 saddler,
- 1 wagoner,
- 2 trumpeters,
- 43 privates.

Total enlisted, 65.

*Provided,* That the President, in his discretion, may increase the number of corporals to eight and the number of privates to seventy-six, \* \* \* making a total of 100.

Each cavalry band shall consist of :

- 1 chief musician,
- 1 chief trumpeter,
- 1 principal musician,
- 1 drum major,
- 4 sergeants,
- 8 corporals,
- 1 cook,
- 11 privates.

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With some minor exceptions, the strength of cavalry troops is, therefore, limited in time of peace to sixty-five enlisted men, the squadron to 261 enlisted men and the regiment to 816 enlisted men, and the maximum or war strength to 100, 401 and 1,236, respectively. Therefore, even if these units were fortunate enough to have their peace strength, they would still require some 60 per cent. increase before they are ready in personnel for field service. Never having this peace maximum of effectives they will in reality require about 100 per cent. increase. Where is this additional personnel to be obtained when mobilization is ordered and where the required mounts? To obtain enough green recruits to fill up our present fifteen cavalry regiments will re-

quire several months under the most favorable conditions of popular enthusiasm. The necessary equipment may be provided in advance, but months will be necessary to convert these recruits into fairly effective cavalymen. We are therefore simply maintaining a paper organization which cannot be realized when war comes, as was thoroughly proven in 1898, but must push our skeletonized regiments to the front depleted of officers with many of the best and most efficient enlisted men detailed on special duty, which takes them from the firing line and duty with their company units. Or, in theory, while we count a cavalry regiment as consisting of fifty commissioned officers and 1,236 enlisted men, we maintain on paper only fifty officers and 816 men, and deducting the average absentees we actually have present about thirty officers and 756 men, out of which, deducting the non-availables, we cannot muster for action more than twenty-five officers and 600 men, or 50 per cent. of our paper organization. In the interest of economy, if not for a more effective organization, should this not be remedied? The great European powers have to consider economy in the military machine and maintain their cavalry regiments at about the strength which we actually use; that is, about 50 per cent. of our paper strength.

#### COMMISSIONED PERSONNEL.

Experience in all countries has demonstrated that to have efficiency it is necessary for the total of the higher commissioned grades to bear such a proportion to the total of those below as to permit of a reasonable flow of promotion throughout and make it possible for an officer through seniority to reach the field grade while possessing proper physical qualifications. In the cavalry of foreign nations this is provided for. We well know what stagnation prevailed in our former artillery regiments when there were five field officers and fifty captains and lieutenants. The present organization of our cavalry regiments is not much of an improvement since we have five field officers and forty five captains and lieutenants. Prior to the last cavalry reorganization, we had five

field officers to only thirty-eight captains and lieutenants. Therefore, the experience of foreign nations as well as our own has in this respect received little consideration in our present organization. The result has been a decided stagnation in the grade of captain, the senior officers of that grade now having over twenty-five years' service, and unless something is done this stagnation must increase rather than diminish. To relieve this condition, we have had advanced measures for elimination and the enforced retirement of officers still qualified for the proper discharge of duty. Can it not be better remedied by a proper increase in the higher grades, eliminating before promotion all unfit for advancement.

The following is quoted from a most excellent paper, by Major Henry T. Allen, Eighth Cavalry, on this subject:

"Our entire service struggles under the misfortune of having officers too old for their grades. This is especially true of the cavalry, wherein the ages now are relatively greater than in other branches, instead of being less as they should be. The best organization cannot be effective when old age clings to grades belonging by nature to youth. The object of these notes, however, is solely to set forth data that may be useful in determining a proper cavalry organization without infringing upon the subject of promotion. But, as a reasonable *flow* of promotion is absolutely necessary to efficiency, and since the contrast in this respect between our country and all other progressive countries is very great, I deem it well to exhibit the following data:

"Infantry grades attained after the various terms of service given:

	<i>Germany.</i>	<i>Austria.</i>	<i>Italy.</i>	<i>France.</i>	<i>Russia.</i>
First Lieutenant .....	..	5	2	2	4
Captain .....	13	10	8	10	12
Major .....	22½	21	18	22	*
Lieutenant Colonel .....	28	26	25	26	20
Colonel .....	30	30	30	28	..
Major General .....	32½	35½	..	..	..
Lieutenant General .....	35	40½	..	33	..

\* Grade does not exist.

"The corresponding grades in the cavalry are attained in yet fewer years, but the exact terms are not at hand.

"The primary objection to maintaining large forces of cavalry is the expense; but when it can be successfully used on foot, as was demonstrated in Cuba, the outgo is largely atoned for. If, however, we are maintaining an archaic and unscientific organization for economy's sake, it were better to reorganize it, even if in so doing the force were cut down. The other states of the world have certainly not less reason to be actuated by economical reasons in their cavalry systems than has the United States. Again, if infantry organization be maintained for the cavalry regiment in order to permit greater adaptability to firing lines, then it were advisable to create a force of mounted infantry and not sacrifice the major rôles of cavalry to a minor one. This is not to be interpreted as a protest against mounted infantry, but a protest against a training which eliminates from the trooper's mind the horse as his foremost weapon.

"European, South American and Oriental states are fully acquainted with our organization, and yet not one has seen fit to adopt it. On the other hand, it is learned that there is no desire or intention on the part of any one of them to possess cavalry regiments containing more than six squadrons.

"Frederick the Great found his dragoons in regiments of seven to eight squadrons each, his remaining regiments in five squadrons—each squadron in both cases consisting of two troops. England has never seen fit to change this squadron organization, though it can well be said that its troops are little more than platoons of thirty-two men each.

"During the administration of President Madison the army was reorganized and increased to ten regiments of infantry of eighteen companies each; two regiments of artillery of twelve companies each, and one regiment of light dragoons of twelve companies. From this it will be seen that the cavalry alone retains its antiquated organization.

"It might be interesting to add here that Austria with six squadrons has three field officers; England and Canada with three squadrons, five; France with five squadrons, five; Germany with five squadrons, two to five; Italy with four to six squadrons, four; Mexico with four squadrons, three; and

Russia with six squadrons, four. This gives an average of approximately one field officer to each 1.25 squadrons.

"The time has passed when we can ignore the practice of other countries whether the matter at issue fall under the War, State or any other department. The maintenance of regiments of twelve squadrons each has for a number of years found few defenders who could advance military reasons for so doing. To state that we had only twelve or fifteen regiments of cavalry made the ratio to other regular branches appear more logical and has been, in fact, one of the strongest motives for such an anomalous organization. The Congress recognizes that cavalry, like artillery, cannot be extemporized and that in our country where the personnel for infantry is abundant and can be rapidly organized, the peace ratio of the two former to the latter must be unusually large. There is no longer any reason to maintain regiments which every military student knows are larger than can be properly handled on the field of battle and so large that an apportionment to the other branches produces an unnecessary number of regimental fractions. Convinced of the justice of our cause, why should we not plead it in the frankest possible manner? The artillery has been increased but probably not sufficiently. At present the necessities of the infantry in that direction are greatest and should, therefore, take precedence over any cavalry legislation. The War Department believes that an excess of army bills spells defeat for all of them. It is highly probable that the department considers that bills for increase of pay, for extra officers, for the medical corps and the increase of the infantry should have consideration before cavalry reorganization.

"The most pressing needs should, by all means, have first consideration; *but while awaiting our turn, we should unite solidly upon a measure best suited to effect the ends for which we exist.*"

## PROPOSED CAVALRY REGIMENT.

Now, considering all of the foregoing, our own experience and that of other countries, I propose the following organization. The present fifteen regiments be reorganized into thirty regiments.

Each regiment to consist of :

- 1 colonel,
- 1 lieutenant colonel,
- 3 majors,
- 10 captains,
- 10 first lieutenants,
- 7 second lieutenants,
- 1 veterinarian,
- 1 sergeant major,
- 1 quartermaster sergeant,
- 1 commissary sergeant,
- 4 squadron sergeants major,
- 4 squadron quartermaster and commissary sergeants,
- 2 color sergeants,
- 1 chief trumpeter, sergeant,
- 1 saddler, sergeant,
- 1 blacksmith, sergeant,
- 1 farrier, sergeant,
- 3 squadron trumpeters, corporals,
- 1 band and
- 6 troops organized into three active squadrons of two troops each, and
- 1 depot squadron.

Each troop to consist of :

- 1 captain,
- 1 first lieutenant,
- 1 second lieutenant,
- 1 first sergeant,
- 1 quartermaster sergeant,
- 6 sergeants,
- 8 corporals,
- 2 cooks,
- 2 farriers and blacksmiths,
- 1 saddler,
- 1 wagoner,
- 2 trumpeters,
- 76 privates.



Each band to consist of:

- 1 band master,
- 1 assistant band master,
- 1 first sergeant,
- 1 quartermaster sergeant,
- 2 sergeants,
- 4 corporals,
- 1 wagoner,
- 2 cooks,
- 12 privates, first class,
- 11 privates, second class.

DEPOT SQUADRON.

Each depot squadron to consist of:

- 1 captain,
- 1 first lieutenant,
- 1 second lieutenant,
- 1 sergeant major,
- 1 quartermaster sergeant, and
- 2 troops of reserve list with the same paper enlisted organization as the active troops.

It has been the practice of this government to keep no further track of a soldier on the expiration of his enlistment. Every year a very considerable number of men are discharged thoroughly trained in the duties of certain arms of the service. If sufficient inducement were offered, many of these men would gladly reënlist for service in reserve units. Many discharged soldiers would be glad to retain a membership in an organization with comrades where they might also qualify for a retired pay during old age. The actual monthly compensation need not be great, probably about \$2.00 a month regular pay would be sufficient, without allowances of any kind. When called into active service the pay and allowances to be the same as for the active list. To facilitate the recruitment of the regiment both in peace and war, as well as to provide for the administration and mobilization of the reserve squadron, the recruitment of each regiment should be localized to certain districts according to population, and a base depot established at the most suitable point therein. The necessary officers of the

depot squadron, and the non-commissioned staff that constitute its active list, should there administer it during peace, as well as receive and instruct recruits for the active squadrons. In war the depot would be continued as the base for the instruction and supply of recruits for the regiment. There should also be kept the reserve supply and equipment necessary for complete mobilization of the depot squadron. These squadrons should be mobilized at stated periods and transfers to the active squadrons and from one depot squadron to another allowed under proper restrictions.

Enlistments for the reserve to be for three years as for the active list. After serving one enlistment on the active list, service in the reserve should count for retirement, and retirement authorized after thirty years' combined service on the active and reserve lists. The retired pay to be computed on the basis of three years on the reserve list equals one on the active list. Thus a corporal of the reserve list who has served three years on the active list and twenty seven years on the reserved list would, when retired, receive two-fifths of what he would have received had his entire thirty years' service been on the active list.

This depot squadron to be employed only in time of war to keep the active squadrons at maximum strength by transfer, also to garrison permanent stations in the United States.

The regimental commissioned strength provides captains and first lieutenants to be staff officers, as at present, the squadron adjutants to be quartermasters and commissaries of their respective squadrons in addition to their other duties. The strength proposed allows but one veterinarian, who should have the rank of first lieutenant after ten years' service, subject to the proper professional examination.

The regimental non commissioned staff provides for three squadron quartermaster and commissary sergeants. They are necessary and will obviate the need of second lieutenants now charged with this duty and they will also save the employment of extra duty clerks and store-keepers.

The chief trumpeter and squadron trumpeters are needed for duty with the trumpet corps as well as by the regimental and squadron commanders. The regimental farrier and

blacksmith and the saddler are needed to care for the horses of the field, staff, non-commissioned staff and band, now dependent on the civilian employees of the Quartermaster's Department or detailed men from troops. These grades would also furnish experienced men for the instruction of troop blacksmiths, farriers and saddlers.

#### THE BAND.

The General Staff, after careful study, recommended a measure to the Secretary of War for the reorganization of army bands, which was approved by him and introduced in both houses of the first session of the Fifty-ninth Congress (S. 3920, H. R. 13376). This measure sought to increase the efficiency of army bands in two ways; first, by increasing the number of players from twenty eight to thirty-six, and, second by increasing the pay to an extent thought necessary to secure competent musicians. The organization proposed was as follows:

- 1 bandmaster,
- 1 assistant bandmaster,
- 1 first sergeant,
- 2 sergeants,
- 4 corporals,
- 1 cook,
- 12 privates, first class,
- 13 privates, second class.

This organization should provide for two cooks instead of one, for a wagoner and for a quartermaster sergeant. As a rule, the unmarried members of the non-commissioned staff mess with the band; consequently, there will be from forty to fifty men for whom rations must be cooked, requiring the services of at least two men for this purpose. It is now necessary to detach one man as assistant cook, taking a musician away from his musical duties. A quartermaster sergeant and a band wagoner are also necessary. The band, as an organization, should with the non-commissioned staff be self-sustaining and have the proper men to care for property in the same way as a troop. If not provided for in the

organization, men must be either detailed from other organizations or taken away from their musical duties. By making provision in the organization for these positions smoother working and more contentment are assured, beside greater efficiency with little or no additional expense. It is not proposed to increase the number in the band over thirty-six, but the following organization is herein suggested:

- 1 bandmaster,
- 1 assistant bandmaster,
- 1 first sergeant,
- 1 quartermaster sergeant,
- 2 sergeants,
- 4 corporals,
- 2 cooks,
- 1 wagoner,
- 12 privates, first class,
- 11 privates, second class.

The first sergeant, the quartermaster sergeant, wagoner and cooks should not be rated nor considered musicians, but, first and foremost, soldiers of proper training for the duty required of their respective positions. The number of musicians herein proposed is less than the number considered necessary by Mr. Sousa, Mr. Santelman, Mr. Loving and other prominent band leaders, but the object has been to make a compromise and provide an efficient musical and at the same time a self contained military organization.

To sum up, our present bands are entirely too small to be efficient. A pronounced volume of sound is indispensable; the band must usually play in the open and the music must carry to a considerable distance to enable troops to hear and be guided by it. There is only one way to secure this, namely, by increasing the number of instruments.

#### CHIEF OF CAVALRY.

There is a large element in the service of the opinion that the several arms should be represented by a chief at the War Department charged with duties for their respective arms corresponding to those formerly assigned to the Chief of Artillery for the artillery arm. There is no denying the

fact that a permanent office at the War Department charged especially with promoting the interests of a particular arm of the service secures far better results for that arm than one covering a multitude of interests for all arms.

During our Civil War, when American cavalry was being developed on lines which have fixed the role of cavalry in modern war, it became necessary for us to establish a Bureau of Cavalry at the War Department and to appoint chiefs of cavalry for the various large commands. Of interest in this connection are the two following orders:

## WAR DEPARTMENT,

ADJUTANT GENERAL'S OFFICE,

WASHINGTON, July 28, 1863.

GENERAL ORDERS, }  
No. 236. }

1. A bureau will be attached to the War Department, to be designated the Cavalry Bureau.
2. This bureau will have charge of the organization and equipment of the cavalry forces of the army, and of the provision for the mounts and remounts of the same.
3. The purchases of all horses for the cavalry service will be made by officers of the Quartermaster's Department, under the direction of the Chief of the Cavalry Bureau. Inspections of horses offered for the cavalry service will be made by cavalry officers.
4. Depots will be established for the reception, organization and discipline of cavalry recruits and new regiments, and for the collection, care and training of cavalry horses. These depots will be under the general charge of the Cavalry Bureau.
5. Copies of inspection reports of cavalry troops, and such returns as may be at any time called for, will be sent to the bureau established by this order.
6. The enormous expense attending the maintenance of the cavalry arm points to the necessity of greater care and more judicious management on the part of cavalry officers, that their horses may be constantly kept up to the standard of efficiency for service. Great neglects of duty in this connection are to be attributed to officers in command of cavalry troops. It is the design of the War Department to correct such neglect, by dismissing from service officers whose inefficiency and inattention result in the deterioration and loss of the public animals under their charge.

By order of the Secretary of War.

E. D. TOWNSEND,  
*Assistant Adjutant General.*

WAR DEPARTMENT,

ADJUTANT GENERAL'S OFFICE,

WASHINGTON, July 23, 1863.

GENERAL ORDERS, )

No. 237. }

The following instructions intended to promote the efficiency of the cavalry service are promulgated for the guidance of all concerned:

I. Inspections will be made of all cavalry troops at the end of every month, reports of which inspections will be forwarded without delay, through the army or department commander, to the head of the Cavalry Bureau at Washington. These reports will exhibit the condition of the cavalry service in general, and especially the condition of the mounts. The report shall state what service the troops inspected have done since last inspected; how many miles their horses have traveled within the month; what character of service has been required of them, and under what circumstances it has been rendered; what appears to have been the care taken of them, as regards treatment, shoeing, etc., etc.; what has been the quantity and character of rations of forage issued to them; if there has been any deficiency of forage, and who is responsible therefor, etc., etc.; and shall convey any other information pertaining to the objects of the inspection which it may be advisable should come to the notice of the bureau.

II. Inspection reports shall divide cavalry horses into four classes:

1. Those which are to be condemned as unfit for any use whatever in any branch of the service. With regard to this class proceedings are to be had as required by existing regulations.

2. Those now unfit for cavalry service, and not likely to be efficient again for such service, which may be used for team or draft horses, or for herding purposes. Horses of this class are to be turned into the Quartermaster's Department.

3. Those which are now unfit for service or nearly so, but which, by timely care and treatment in depots will regain condition. Such horses are to be sent to such depots as may be established for the army, to be replaced by an equal number of good animals from the depots. As soon as serviceable the horses turned in will be eligible for reissue.

4. Serviceable horses.

The number of such class of horses will be given in every report of inspection for each troop in the service.

III. A suitable number of officers of the Quartermaster's Department will be directed to report at once to the Chief of the Cavalry Bureau, to be charged with disbursements for the objects of his Bureau, under his direction.

IV. Purchases will be forthwith made of a sufficient number of horses to meet the present and prospective wants of the service up to September 1, 1863, and the horses placed in depots for issue from time to time.

V. Requisitions for remounts will be made through the intermediate commanders on the Chief of the Cavalry Bureau, who will give orders on the depots for the horses needed to fill them.

VI. Officers of the Quartermaster's Department assigned to duty under the orders of the Chief of the Cavalry Bureau, will make their reports and returns of money and property, as required by existing laws and regulations, to the accounting officers of the Treasury and to the Quartermaster General, and will also make to the Chief of the Cavalry Bureau such reports and returns as he may require for his information.

Estimates for funds will be submitted to the Chief of the Cavalry Bureau for his approval before being acted upon by the Quartermaster General.

VII. Major General George Stoneman is announced as the Chief of the Cavalry Bureau in Washington.

By order of the Secretary of War.

E. D. TOWNSEND,  
*Assistant Adjutant General.*

It would, therefore, be the part of wisdom and prudence to provide in peace for a small but efficient office of this character which will promote developments in the direction that war will inevitably demand.

For many years we did without a general staff corps and a chief of artillery, but the results obtained from the establishment of this corps and the latter office have amply proved the wisdom of establishing both.

All great European powers appreciate the necessity of such an office, and each has a special head for its cavalry. We are to-day spending very considerable amounts on our cavalry service, but are we securing full measure therefrom?

#### SUMMARY.

The organization proposed will give:

##### Commissioned:

1 brigadier general .....	1
30 regiments, including chaplains and veterinarians .....	1,020
Total .....	1,021

##### Enlisted:

30 regiments, 654 enlisted men each .....	19,620
Maximum enlisted strength now authorized .....	18,540

##### Reservists, Depot Squadrons:

60 troops, 100 enlisted men each .....	6,000
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#### THE MACHINE GUN.

In conclusion, I do not favor machine gun units as an integral part of the cavalry organization, valuable as that weapon is. Let our entire organization be homogenous in all its parts. The present mountain field artillery gun is of far more general use to a cavalry column, but we do not advocate absorbing these troops.

So let the machine guns be organized as our chiefs see fit, to be attached to cavalry when conditions warrant.

## TARGET PRACTICE AND TRAINING FOR MOUNTED ACTION.

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BY LIEUTENANT K. B. EDMUNDS, EIGHTH CAVALRY.

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DURING four years of service with mounted troops two strong objections to our present system of instruction have presented themselves to the mind of the writer. They are: first, so many of the best months of the year are devoted to target shooting that little time is left for training in the equally important mounted work; second, the course itself does not give the best training for fire action in active service. If this article can call forth any criticisms or suggestions on the subject, it will do all that is hoped for it.

Assuming that all our training should be devoted to giving us the maximum efficiency in war, let us first see how cavalry acts in war, then what time should be taken to train it in its various functions.

In campaign, "Cavalry is the eyes of an army," our post is far in advance; we must be able to ride far and hard to make the best and most economical use of our mounts. Consequently we need training in horsemanship, marching and reconnaissance.

In action "Cavalry possesses three methods of fighting: \* \* \* the charge with the arme blanche, dismounted action with the carbine, and artillery fire." Although in our service there are many officers who deny that cavalry can fight with the saber, I think that the majority of our mounted officers will agree with the author of "Cavalry in Action." Neglecting artillery fire, which does not concern us, it follows that we must be able to cover a thousand yards or more in line at a gallop, and at the end to hit our opponent with closed interval in perfect alignment and at full speed. We must have a good saber and be able to use it. We must train our squadrons to maneuver quickly and accurately.



We must thoroughly train our horses. Lastly we must be able to maneuver dismounted, to shoot accurately and to direct and control our fire.

With the exception of marching, reconnaissance and shooting, we have nowhere near the time to accomplish these ends. The practical season is from April to November, seven months. Taking the last year, for example, my squadron spent three months at target practice and two months marching and at maneuvers. To this time must be added two weeks of supplementary season, and about twenty-one days spent on weekly and monthly practice marches. This leaves about one month of the practical season for training in mounted work and this time is so broken up that it is impossible to make any systematic arrangement of it. During the next year, owing to the fact that there are no maneuvers, we will have an additional month, but even when multiplied by three (the enlistment period), this is not time enough to train cavalry, and it is not to be supposed that we will ever go into action with ranks filled with men of over two years service.

We should also consider here the time spent by officers and men at competitions. While the training of the troop may still go on during the absence of these individuals, their services are lost during that time and they are generally among the best men in an organization. Last year the competitions were held during maneuvers. As a result the six troops which attended from this post went without the only two captains for duty with troops (who also commanded squadrons), one lieutenant and several first sergeants and quartermaster sergeants. One troop was entirely deprived of the services of its officers. Yet regimental pride requires that the best shots be sent to these events, and the best shots are generally the most experienced officers and men. It may well be questioned if this is not too big a price to pay for the medals won.

It may be said that much practical instruction may be given during the winter months, but comparatively few of our cavalry posts are provided with riding halls. It is true that there are about twenty days during November and

December when out-door drills are practicable, but this time can not be depended on, and it is too short to arrange any progressive instruction. It may also be said that all the target season is not taken up with firing, but on days when out-door instruction of any kind is practicable, the troop officers will be found either on the firing line of their own troops or marking in the pits for some other.

It has already been stated in what things we should train our cavalry. These can roughly be divided into three classes: training for field service and reconnaissance, training for dismounted action and training for mounted action. In the first should be included practice marches, patrolling, advance and rear guard work, outposts, etc; in the second target practice and dismounted drills; in the third horse training, the handling of arms, mounted, and all mounted drills. No true cavalryman will say that the last of these divisions is the least important of the three, yet under the present system no systematic training in mounted work is possible. We deem it necessary to set aside three months of the year for target practice, to lay out a careful, full and systematic course for it, to devote to it a large amount of time outside the season. Why is not equal attention given to the mounted work? It is at least equally important; it requires more time, and it requires a systematic arrangement. Instead we find that we have but a scanty six weeks for mounted training, and this time must be taken a day here and a day there and devoted to things which the troop commanders think most needed. Under such a lack of system and time there is, and can be, no thorough training.

Let the practical year be divided into three parts, proportional to the time necessary to train troops in their various functions. Let the mounted training be arranged progressively and systematized as thoroughly as the target practice is now. Confine all firing, including competitions, to the target season. Assign a certain time for training in field service and use this time to the best advantage. When this is done we will have troops which can fight well both mounted and dismounted, and which will be ready and equipped for the field at all times.

The results of lack of training are painfully apparent in our mounted troops. I have never seen a troop which could always deliver a good charge; the result is sometimes obtained, but the troops generally lack the cohesion necessary for shock action. The men, as a rule, ride well so far as sticking on goes, but have little control over their mounts, and handle their weapons awkwardly when mounted. They are, however, good field soldiers, quickly learning to take care of themselves and their horses and absorbing readily the principles of camp sanitation. This is as it should be, considering past events, for the marches of some of our troops during the Indian wars have never been equalled. I have never seen an officer or soldier in our service who by any stretch of imagination could be called a swordsman.

Considering the target course itself, does it best accomplish the end for which it is intended, viz., to train our men so that in action their fire will have the maximum effect? I think the answer must be, "No." It does teach them to be very good individual shots, the majority of them only at the short and mid-ranges, all of them only at a stationary target and at known distances. But in action the firing is never at known distances, seldom at a stationary target, and seldom individual. It would seem, indeed, that a troop commander would spend more time on the collective fire, inadequate as the present course is, since collective fire counts as much for the standing of his troop as the individual. But in practice it generally works out that the troop commander is beguiled into spending nearly the limit of his ammunition allowance on the attractive and lucrative individual shooting, so that when he comes to collective there is little left.

"Fire discipline is the unhesitating habit, developed by instruction and training, of commencing, relaxing, or ceasing the fire, and concentrating it on the designated object, in obedience to orders." Where is this instruction and training to come in? Presumably in the target season, but we may look in vain through the course laid down. We have already seen how much time there is for training during the rest of the year. In the collective fire course we "commence" the

fire, but where do we "relax" it, or "cease" it, or "concentrate" on any other object than the one we start with? Yet that fire discipline is important no one can deny. Would it not be well to devote some of the time we now spend in developing a few sharpshooters and experts to developing this fire discipline in the troop?

Of late years the development of expert shots has been much encouraged by pay, medals, and participation in competitions. But it is a question whether, in action, there will be much difference between the shooting of our experts and sharpshooters on one hand and our marksmen and first-class men on the other. I believe that when a man has once learned to use his sights intelligently, to hold firmly, and to pull steadily, he has learned all there is to know about military shooting, and once learned these things are not readily forgotten. What is the difference between an expert and a marksman? First, the man's personal equation, his intelligence, strength, eyesight, and temperament. These cannot be changed by any amount of range practice. Second, his intelligent use of advantages and devices which can only be had on the range. In action he will not have flags and anemometers to tell him the strength and direction of the wind; telescopes to give him the mirage will be lacking; the distance of each shot from the objective will not be marked, so that he can make his careful adjustment of sights; finally, and most important, he will not have the exact range. What is the use of training men to shoot within a few feet of an objective when in action we cannot depend on giving them the range within fifty yards? The bullet flies to the range to which the rear sight is set, not to the actual range of the objective. The accurate shooting of the target range is liable to give us an exaggerated idea of the effect of the fire in action of men expert in target shooting. The results obtained when the conditions of the range are lacking may be illustrated by a few examples which have come under my personal observation.

In the late spring of 1905, the first squadron of the Eighth Cavalry, stationed at Fort Sill, had just finished the target season. A good showing had been made and there were

many sharpshooters and marksmen in the ranks, and few third class men. Major Ripley, who commanded the post, sent two troops out with twenty rounds of ball cartridge per man. At a certain point we were informed that we were under fire, ordered to dismount and go into action. The troops were dismounted under cover, and after five minutes work with the field glasses we picked up the objective, which was a double row of kneeling and standing silhouettes in our direct front.

The targets blended so well with the background that they were difficult to see, many of the men not being able to locate them even after their position was pointed out. The ground was damp and gave no dust. The chiefs of platoon gave the range, which was pure guess work, no results being obtained from the volleys. It turned out afterwards to be about 1,500 yards. All the ammunition, about 1,500 rounds, was expended. Results, eleven hits. There were about seventy-five men firing. The troops were armed with the Krag carbine.

In the spring of 1906 I was on a mapping detail in the hills east of Manila. The party was on foot. When leaving our base camp I took three cavalymen and a scout. The country was full of deer and hog, and the pieces were carried loaded and locked. On one occasion while we were going down a trail in single file, a deer got up within 100 yards, and ran parallel to the column. Every magazine was immediately emptied at him, but he escaped unhurt.

During the same trip moving deer four times came under fire of from two to five men, at distances of from 100 to 300 yards, yet during the month we killed but two deer, and one of these with a shotgun. The escort were picked men, old soldiers, and had all been through several target seasons.

Up to this point I have endeavored to establish two points:

First. The time expended on target practice is so long that it seriously interferes with the training of the troop in the equally important mounted work.

Second. The target course as at present constituted does not give the best training for active service. Too much attention is given to individual training, and not enough to organization training, *i. e.*, fire discipline.

It remains to be seen how these faults can be corrected. Two things must be done; the individual course must be cut down, and the collective fire course must be extended and made more nearly like firing in action, for in collective fire lies the training in fire discipline. It has been already stated that in action there will be little difference between the excellent shots and the good shots. It will not be the fire of individuals but the fire of tactical units that will count. Then let us have but two classifications, and let the higher include all good shots, and by good shots I mean marksmen and first class men. For the sake of clearness I will call this classification that of riflemen. When a man has qualified as rifleman, excuse him from further individual firing during his service. He has learned to shoot and it is believed that he would get all the practice necessary to keep him in training in the collective course. If the skirmish fire is omitted, it is believed that about two thirds of the troop could qualify as riflemen (say the qualification requires sixty per cent). This at once cuts down the time spent on individual training by two thirds. All energy, time and surplus ammunition could then be employed in bringing the remaining one-third up to standard. By cutting out the skirmish course (which training would be covered in the collective course) and giving the preliminary training during the theoretical season, the individual course should be cut down to two weeks. However, this course should include 800 and 1,000 yards. The qualification of rifleman should carry with it a substantial increase in pay. Whenever a man's rifle is changed he should, during the next target season, take enough of the rifleman course to properly sight his piece.

The objects to be sought in collective fire have already been clearly shown in the definition of fire discipline, if we add a maximum of hits at all ranges. The troop must be trained to open fire carefully, to fire the indicated number of rounds, to cease fire promptly at command, make a careful

change of sight, and open fire on a new objective. Without going into details I believe these ends could be obtained by having a series of lines of disappearing figures at various ranges, say thirty objectives between 400 and 1,500 yards. These targets could be operated from a central trench by a device similar to the switching system in a railroad center. The procedure would be about as follows:

The troop takes its position and loads; a line of targets appears, the troop commander estimates the range, fires at least one volley to verify it, and opens fire at will. A certain time after the appearance of the first row, say three minutes, a second row appears. The troop must immediately, and at command, cease fire on the first objective and open on the second. The first row remains in sight until the command is given to open fire on the second. Penalties should be inflicted on the troop for shots fired after the command for ceasing fire. The record course would consist of about five of these changes of objective made in succession. Troops to be graded on the aggregate of hits. The course might be extended by firing at moving targets, and a skirmish run made by the entire troop at a common target.

The troops should be graded on their collective fire only. The men should be paid on their individual fire only.

The advantages claimed for this system are:

1. It will favor the development of all the troopers into good shots, rather than the development of a few of them into excellent shots.
2. It will train the troop in fire discipline.
3. It will take but a short time.
4. Much of the preliminary training can be given with blank cartridges on days when the conditions are not good for firing.
5. The organization receives the training, not the individual.

The principal objection I can see advanced for this system is that the troops do not all fire at exactly the same ranges, consequently one might have some advantage over the others. But if we bear in mind that this target practice



is not a game to see who will win out, as it is now regarded, but is an actual and serious preparation for war, this objection becomes insignificant.

I have purposely avoided mention of the pistol in connection with range practice, as I do not wish to become involved in the old discussion as to its relative importance. However, I think everyone will agree that if the pistol is to be carried the men should be skilled in its use. Under present conditions pistol practice is rushed through on days when range practice is undesirable, and with a wary eye fixed on the ammunition expended.

Our mounted troops can now be called very good mounted infantry. They are familiar with the use of their rifles and can ride well on the march, can care for their horses and dismount quickly to fight on foot. The squadron when dismounted becomes a handy little battalion. As much cannot be said for the mounted work. The troops do not charge well, the men are not skilled in the use of the sabre, and the horses are not trained to make the quick answer to the aids necessary for quick work in close order, and which must be so necessary in the *mêlée*. Among many officers there is a decided doubt that mounted action, and especially sabre action, is practicable. This is natural, as our wars of the last thirty years have not been of a character which would favor this kind of fighting, and there is a tendency caused by improvements in the range and accuracy of small arms to unduly value rifle fire. This view may be correct, although it is held by the military men of no other nation but our own.

"How, I ask, can the cavalry perform its rôle in war until the enemy's cavalry is defeated and paralyzed? I challenge any cavalry officer, British or foreign, to deny the principle that cavalry, acting as such against its own arm, can never attain complete success unless it is proficient in shock tactics.

"Cavalry soldiers must of course learn to be expert rifle shots, but the attainment of this desirable object will be brought no nearer by ignoring the horse, the sword or the lance." (Lieutenant General Sir John French.)

"Having admitted that dismounted action has increased considerably in importance, particularly on the offensive, it



nevertheless remains the fact that the combat with cold steel remains the chief *raison d'être* of the cavalry, and when the principles have to be considered according to which troops have to be employed on the battlefield, the actual collision of cavalry's 'masses' remains the predominant factor." (Lieutenant General Frederick von Bernhardt.)

In our own service the following was approved by the chief of staff: "But in the case of a charge over open ground of large bodies of cavalry against each other, where there is no room for deployment, the contest is usually decided by the shock of men riding boot to boot at full speed against each other. In the *mêlée* which follows this collision the troops are more or less jammed up against each other, horse against horse. In this *mêlée* a pistol discharged at an enemy may easily kill a friend, and in any case the pistol is no match at arms length for a sharp sword. The pistol may hit five times; it is then useless. The sabre, on the other hand, can strike an infinity of blows, and if sharp, its wounds are terrible. Such a combat will be decided by the most determined men, on the strongest horses and by the most skillful use of the sharpest sabre." (Extract from opinion of Cavalry Board.)\*

If the view of the advocates of mounted infantry tactics and pistol fighting is correct, we should at once discard the sabre as a useless encumbrance. If not correct we should be armed with a good sabre, be skilled in its use, and we should bestow at least as much attention to our mounted work as to our rifle practice and practice marches. At least four months of the year should be set aside on an arranged schedule for training in mounted work and for nothing else; other times when mounted drills are practicable could be used as the troop commanders see fit. When this is done we will be in a position to meet on at least equal terms the highly trained squadrons of Europe, and our troops may be called in the best sense of the word, cavalry.

\*Taken from "Weapons and Munitions of War," Captain John P. Ryan, Sixth Cavalry.

## MACHINE GUN ORGANIZATION.

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BY HENRY J. REILLY, SECOND LIEUTENANT AND SQUADRON QUARTER  
MASTER AND COMMISSARY, THIRTEENTH CAVALRY,  
COMMANDING MACHINE-GUN PLATOON.

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### *Organization.*

IN considering the organization of machine gun detachments, the first question naturally arising is, should they be directly attached to and a part of infantry and cavalry organizations or should they be organized as a separate arm.

To determine this it is necessary to consider primarily the tactical handling of these weapons, which is determined by their fire power, mobility and vulnerability.\*

*Fire Power.*—Using the same ammunition as the rifle its ballistic properties are those of that arm, its fire power differs then only in rapidity of fire, which is greater; in dispersion of fire, which is practically uniform, as against the irregular distribution of rifle fire; in the dependency on the personal element, which is less, due to the rigidity of its mount; and in efficiency against individual or widely scattered targets, which is less, due to its inability to affect such targets without either sacrificing its rapidity of fire and therefore being of no more use than a single rifle, or else using an amount of ammunition incommensurate with the result produced.

On the first two of these differences, rapidity and uniformity, depend the intensity of fire of the machine gun.

How can this intensity be best taken advantage of: by massing the guns or dispersing them?

The experiences of the Russo-Japanese War would seem

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\*Under vulnerability is included every effect, other than moral, that fire could cause.

to dictate dispersion in small groups as against massing, except in exceptional cases, witness the following quotations:

"*Concentration and dispersion* (in attack or defense).—The result of employing a number of machine guns together is not by any means necessarily the sum of their several values; for instance, over a narrow front there is little difference as regards time or fire effect, whether we employ two or six guns. Moreover, the amount of ammunition used in a short space of time is so great that unless it is used with economy the result will not counterbalance the means; also the sources of ammunition supply in the neighborhood, the brigade reserve, the ammunition columns, will speedily run out of ammunition if called on to supply a number of machine guns." \*

"Except when a broad front has to be covered by machine guns (as when employed to protect a space between two forts widely separated) massing of guns is a principle to be avoided.

"Four or six guns per battery and one battery per regiment were usually suggested." †

"In consequence of the experience gained during this war, the Japanese authorities took steps after the war to attach half a machine-gun detachment of these guns to each infantry regiment to be utilized either in that form or to be concentrated according to necessity in each brigade." ‡

"The cavalry machine-gun detachments consist of eight guns divided into two sections, each cavalry brigade has one of these detachments which may be easily distributed between the two regiments of the brigade." §

In each case a detachment of six or eight guns so arranged can be easily split up into smaller units.

\* From an article by Captain F. Takenouchi, "The Tactical Employment of Machine Guns with Infantry in Attack and Defense," translated from "Kiaakosha Kiji" of October, 1906, by Captain E. F. Calthrop, R. F. A., British Army."

† Lieutenant Colonel Edward J. McClernand's report on Russo-Japanese War.

‡ Captain Victorin's article in the CAVALRY JOURNAL for July, 1908.

§ Editor's Table, CAVALRY JOURNAL for October, 1908.

It is on the intensity of the fire and the third of these differences, *i. e.*, lesser dependency on the personal element, that the claim for the superiority of machine gun over the rifle at ranges between effective small-arms fire and the lesser artillery ranges is largely based. That there are grounds for this claim seems generally to be conceded.

It is believed, however, from what little firing has been done with the machine-gun platoon of the Thirteenth Cavalry at 1,200 yards (the greatest range obtainable at Fort Sheridan), that, while superior to rifle fire at the longer ranges, beyond 1,200 yards, the effectiveness of the fire would be so small as only to warrant the consumption of ammunition in the case of exceptional targets offering themselves.

This view is borne out by the experience of the Japanese in their recent war, as is shown by the following quotations:\*

"I draw the following deductions from the above examples. \* \* \* While not altogether vetoing the employment of machine guns for covering fire, I only condemn their substitution for artillery at long ranges.

"To open fire on a thin line of skirmishers at long range is a most useless proceeding and gives no return for the ammunition expended. \* \* \* Four of the enemy's machine guns, at a range of about 1,000 yards, swept our widely extended skirmishing line with fire. It had no effect whatever on our advance and the enemy eventually evacuated the position.

"On the other hand, fire at close range at skirmishers advancing to the assault, or at bodies in mass, gives overwhelming results in a short time.

"These practical examples prove what has been stated, that the power of this weapon must not be overestimated; that in the defense the enemy cannot be stopped at a distance in excess of the effective range of the rifle and that any statements to the contrary show an ignorance of the economical use of the machine gun."

\*From an article by Captain F. Takenouchi, "The Tactical Employment of Machine Guns with Infantry in Attack and Defense," translated from the "Kaikosha Kyi" of October, 1906, by Captain E. F. Calthrop, R. F. A., British Army.

The use of telescopic sights would greatly increase the fire power of the machine gun at the longer ranges, but as it would also increase the fire power of the rifle, no advantage can be claimed in this direction.

The machine gun differs from weapons classified as artillery not only in the character of the projectile used, and its lack of destructive effect as regards material, but also in its range, in which latter difference it cannot compete in any way with the artillery.

*Mobility.*—When carried by pack animals the machine gun can keep up with and go anywhere that the infantry or cavalry can go. This has been amply demonstrated by the platoons in our own service and has been shown to be true in other services. Captain Takenouchi of the Japanese Army\* states that guns carried on pack animals and capable of being man handled are available in any situation. Captain Victorin, of the Austrian Cavalry, states that pack animals carrying machine guns were able not only to keep up with the cavalry but “to climb up and down declivities, take high and broad leaps and to gallop over long stretches,” all with success.†

*Vulnerability.*—The mobility of machine guns permitting an appearance on any terrain it is necessary to decide whether or not they present to the enemy a target of such dimensions as to prohibit their use under effective small arm fire.

On turning to the Russo-Japanese war for examples we find in Colonel McClernand's Report:‡ “On the offensive he (speaking of an officer of high rank) would send them (the machine guns) forward among the first lines of the battalions to which attached,” \* \* \* and later: “It is not essential that they be at all times immediately on the line occupied by the infantry, although when the latter, after a

\* In an article, “The Tactical Employment of Machine Guns with Infantry in Attack and Defense,” translated from “Kaikosha Kiji” of October, 1906, by Captain Calthrop, R. F. A., British Army.

† From translation published in CAVALRY JOURNAL for July, 1908.

‡ Pages 95 and 96, Part V, Reports of Military Observers Attached to the Armies in Manchuria during the Russo-Japanese War.

considerable advance, meets with determined opposition, some guns should be brought up."

"When advancing under fire it is often a good plan to move one gun at a time."

Showing that the guns were not only advanced under fire, but one of the best times for putting them in the infantry line was when that line was meeting with considerable opposition which presupposes a heavy fire.

From Captain Takenouchi's paper we find the presence of the guns on the infantry line taken as an accepted fact, the discussion being whether or not the guns should accompany the first line from the beginning. This is shown by the following quotations:

"In the attack of a prepared position the question whether machine guns should accompany the first line from the commencement, or be held in reserve under the disposal of the commander of the force, is a much vexed question."

"The conclusion to be drawn from the above is, \* \* \* and that not until the final moment of the final attack should they be used with their full power in the first lines."

And later—

"At the battle near Mukden \* \* \* the enemy's position at Sha Shan was taken. The enemy in Li-Chia-wo-peng at about 500 yards from the captured position, then poured a heavy fire into us; \* \* \* on this occasion our machine-gun detachment \* \* \* which had accompanied the assaulting column advanced on to the position."

*Conclusions.*—From the above we see that while the mobility and vulnerability do not prevent, the fire power demands, on the part of the machine gun, close association with the troops using the rifle.

The above discussion has equally to do with infantry and dismounted cavalry, both in the attack and on the defensive.

Speaking broadly, the best use of cavalry is in a combination of mounted and dismounted action. In this use machine guns are particularly valuable, as by their fire power they are able to supplement the fire of the dismounted men to such an extent as to materially decrease the number

necessary, thereby increasing the number available for the mounted attack.

In the mounted attack of cavalry against cavalry these guns are useful in compelling, by means of their fire, an earlier deployment on the part of the enemy than otherwise would be made, thus disclosing their plan of attack and making the attack more difficult of control.

It has already been shown that their mobility is such as to permit of their accompanying cavalry anywhere.

Artillery, employed more or less in masses, helps the infantry when they are helpless because of the range, assists them through the fire fight, but because of the danger to them must cease firing when they are about three hundred yards from the enemy's trenches.\*

Machine guns employed in small detachments, accompany the infantry, with them helpless at the greater ranges, into the small arms fight where at first, largely with the regimental or brigade reserves,† they gradually come into action; until, just before and during the assault up to shortly before the moment of actual contact,‡ they give by means of their intense fire that support so essential at this final stage of the attack.

In a similar manner the cavalry attack is supported by the horse artillery until within a few hundred yards of the enemy, while the machine guns, though supporting the attack at rifle ranges and helping to keep down and draw the fire of any small arms, are particularly useful in the last stages of the

\*"Present Method and Lessons in Regard to Field Artillery taught by the Russo-Japanese War," by Captain Tiemann N. Horn, Third United States Field Artillery in the *Artillery Journal* for November and December, 1908.

†"And not until the final moment of the final attack should they be used with their full power in the first line"—Captain Takenouchi—"Machine guns should not be kept in the firing line, but held in reserve until the opportune moment arrives \* \* \*. The commander of a unit will fight men with redoubled confidence if he feels that, at a critical moment he has in hand an easily controllable means of instantly increasing his volume of fire."—Colonel Macomb's article in the *CAVALRY JOURNAL* for January, 1907.

‡"An officer who commanded one of the batteries (M. G.) at the battle of Mukden \* \* \* said that on one occasion there he continued to fire until their infantry had arrived within thirty meters of the enemy's position."—Colonel McClernand's report, page 96.

attack, and, in the first stages of the pursuit, where, on account of the closeness of the combatants, it is dangerous for the artillery to fire.

From whatever point of view examined it is seen that the best use of this weapon is found in close tactical association with the infantry and cavalry, and that in units of never more than six or eight, and generally two, three or four guns.

Not the association of one arm with another in which each, though doing its best to help the other, is compelled through a great difference in arms, fire power, mobility and vulnerability to a more or less independent use of its own particular tactics, though all are striving for a common end, but a relationship borne of a similarity of tactics which compels actual association during the different phases of the fight.

Apparently, then, while a knowledge of the machine gun and its powers and limitations is essential for an officer commanding these weapons, it is above all necessary, in order that they may be used to the best advantage, that he be, primarily, an officer of that branch of the service with which his guns are serving. In other words, if serving with infantry he must be an infantryman first and a machine-gun man second; if with cavalry, a cavalryman first and a machine-gun man second.\*

In answer to the objection which will be used against this, that the functions of field artillery and horse artillery differ and yet they are composed neither in the one case of infantryman, nor in the other of cavalryman, commanding guns, but of the same arm, and are assigned as necessary to the other arms. It may be said that the fire power and vulnerability of artillery compel tactics of such difference from those of infantry and cavalry as to necessitate on the part of the artillery only such general knowledge of the tactics of these other arms as it is necessary for one branch to have of the others to insure a proper coöperation of the three arms;

\* "The rôle of the cavalry machine gun is to increase the fire power of the cavalry, to support it everywhere and to assist it in carrying out its many various missions both in mounted and dismounted action. The detachments must be instructed in and imbued with the cavalry spirit."—Editor's Table, *CAVALRY JOURNAL* for October, 1908.



furthermore, artillery is used in large tactical units and is assigned to the cavalry and infantry divisions, it being given to smaller units only when they are to act independently; while it has been shown above, it is believed that the tactics of machine guns are primarily those of the arm with which they are serving and that they are rarely used in units of more than six or eight guns, generally less, which following the ratio established in the Russian-Japanese armies would mean assignment to brigades and regiments.\*

Further objections might be raised on the ground that the technical knowledge required makes a stronger bond between foot and mounted machine-gun organizations than tactics could possibly make between the infantry and the former or the cavalry and the latter; and that even though their tactics demand their being fought, not in large masses by themselves but in small units attached to troops of other arms, their tactical efficiency would not be impaired by having them in single corps and assigning them as needed, as is done in the Signal, Medical and Engineer Corps.

The technical training needed may be divided into knowledge of the ballistic properties of the gun, and packs and packing. As the ballistic properties are practically those of the rifle this is common to every infantry and cavalry officer. The few differences are easily learned. The mechanical part is not difficult and may be soon mastered by anyone. As to packs and packing, this is something about which no officer of the combatant branches can know too much. If the case of the field and horse artillery is again cited, it may be answered that in addition to the tactics of these arms preventing any closer organization with the other arms than that found in the larger units, the technical training requires a knowledge of material so different from that used in the infantry and cavalry as to forbid their being efficiently handled by officers of these branches. As an answer to any further comparison between light artillery and machine guns it should be remembered that these latter weapons are

\* In Capt. Victorin's article in the *CAVALRY JOURNAL* for July, 1908, he states that each Russian infantry regiment (3,000 men) is to have four guns and that each Japanese cavalry brigade (1,200 men) is to have eight.

neither as regards tactical handling or technical training, field pieces, but small arms.\*

As to the Signal, Medical and Engineer Corps there is a basic difference between them and machine-gun detachments which would seem to vitiate any comparison, the primary function of the latter being combat; and of the corps mentioned, some purpose other than combat, such arms as they possess being for their defense, while performing these other purposes.

The engineer troops are generally attached to the higher units only, the Signal and Medical Corps owe their allegiance, if it be put that way, not so much to the commander of the unit to which they are attached as to some other; the former corps being merely a means whereby that other directs and controls his different units; while the men of the latter corps attached to the smaller units are the means employed by a higher officer of their own corps of collecting and bringing under his care the wounded of the different units.

The machine-gun detachments owe their allegiance to the immediate commander of the unit with which they are serving and are used by him equally with his other units for tactical purposes.

Assuming then that it is best for mounted machine gun organizations to be a part of the cavalry and foot machine-gun organizations of the infantry rather than being united in one corps, it becomes necessary to determine in what manner they should be attached to the two branches.

Following in general the line of reasoning above, they should be attached to and part of units consisting of such number of men that about six or eight guns would be in the correct proportion, this being about the maximum number ever used together.

The objection urged to this would be that it makes a unit whose constituent parts differ, in organization, tactics, and in the kind of training needed.

Organization, depending upon tactics and technical train-

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\*"But at present my opinion has undergone a decided change \* \* \* to the effect that the machine gun is not a part of the artillery, but a small arm."—Captain Victorin's article, page 118, *CAVALRY JOURNAL*, July, 1908.

ing, this objection has already been answered, as it has been shown above that while the latter does not forbid, the former demands the closest association of machine guns with the arm with which they are serving.

As for tactics, the difference as far as fire action is concerned is mainly one of drill regulations. If the various trainings necessitated by a mixed command can be successfully carried on under one commanding officer, as is done in a mixed garrison, no reason is seen why it should not be done in, say, a regiment, the constituent parts of which are to fight together under the regimental commander in action. The more a commander handles and is responsible for in peace the units he is to fight in war, the more efficiently it will be done when war does come, particularly if he has served when in lower grades in command of, and as a subordinate in these different units.

The colonel of a regiment having a machine gun troop would not likely let that troop suffer as regards training when he has once realized that on the battlefield it is to be an intimate part of his own command; this would be particularly true of the time, should it come, when there will be colonels who have served as lieutenants and captains of machine gun troops.\*

That serving with troops of different kinds is desirable is shown by the frequent recommendations that officers serve for a time in arms other than their own, so as to prevent that inefficient handling of these other arms so frequently seen in a mixed command, particularly when artillery is assigned to infantry or cavalry units.

This paper having mainly to do with the organization of machine-gun detachments with regard to their use with cavalry, the attaching of the mounted detachments to the proper cavalry units will alone be considered.

From their experience in the Russo-Japanese war the Japanese have decided to attach to each brigade of cavalry,

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\*In spite of the present vicious organization little difficulty has been experienced, as far as the Thirteenth Cavalry is concerned, in giving the men of the machine-gun platoon that training which the platoon commander has considered correct.

1,200 men, a detachment of eight guns.\* Following out their experience this would seem to indicate eight guns as the proper number to assign to one of our regiments. However, as our cavalry is armed with the same rifle as the infantry and receives the same instruction in its use, the need for these guns is not as great as in those cavalries of which this does not obtain. At the same time, due to the fact that even in dismounted action it is advantageous to have as large a mounted reserve as possible, the proportion of these guns per thousand men should be greater than the proportion found correct for the infantry. Captain Parker† tells us that the correct proportion for the infantry is from two and one-half to three and one-half guns per thousand. Taking the upper limit, four and two-tenths guns is the correct proportion for 1,200 men. A mean between this and eight would be about six guns, which would allow an assignment when necessary of two guns per squadron.

If the cavalry is reorganized into regiments of four squadrons of two troops each, making two squadrons to a wing; or into three squadrons of three troops each, giving regiments of 800 or 900 men; following this proportion, we would have four guns as the correct number per regiment. It has been shown above that six to eight guns are, as a rule, the maximum number ever used together at one time. As this number would take for its proper handling about 100 men, a captain's command, a troop commanded by a captain and composed of six guns assigned to and part of each regiment of cavalry would appear to be the correct organization. It will be generally conceded, it is believed, that it is not best to have a tactical and administrative unit of less than a captain's command.

With our present organization of three squadrons to a regiment, and particularly as in the service of security and information, the different squadrons of a regiment are often separated; and, as it has been found that machine guns should never be used in units of less than two guns,‡ a di-

\*Editor's Table, *CAVALRY JOURNAL* for October, 1908.

†*Journal Military Service Institution*, December, 1908.

‡Editor's Table, *CAVALRY JOURNAL*, October, 1908, and on page 96 of Lieutenant Colonel McClernand's report on the Russo-Japanese War.

vision of the troop into three platoons of two guns each would seem advisable. Each platoon must then be complete in itself and capable, when necessary, of being readily separated from the remainder of the troop and acting independently.

This being so, the organization of the platoon should first be determined, deducing from it that of the troop.

## PERSONNEL.

To readily pack, unpack, set up and handle a gun in action, four men are necessary. The firing can be done by two, which leaves the other two available for the supply of ammunition. As the led animals are generally some little distance from the guns, and as it is frequently necessary to repack the gun and ammunition at the same time, a third ammunition man posted with the ammunition mules has been found necessary.

When the squadron dismounts to fight on foot, it being impracticable to advance with all the animals and the distance to the first point at which the guns are to be put in action generally being too great for them to be readily carried there by hand, a formation in which all the cannoneers dismount and with the gun mule and one ammunition mule from each section, advance to their first position, the lead animals remaining with those of the squadron, has been found advisable. If the drivers of the mules in question dismount and lead them it makes too many animals for the horse holders to take care of, tends to confusion and consumes more time; therefore, after several different ways had been tried, it was found that the best method was to leave an extra cannoneer to lead the gun mule when dismounted, the ammunition mule being led by the third ammunition man, this method leaving the four cannoneers to handle the gun, the ammunition man remaining with his mule and giving an extra man to help with the animals and ammunition when the platoon was not dismounted to fight on foot.

To handle gun .....4

To pack and unpack ammunition.....1

To lead gun mule when dismounted .....1

Total one gun .....6 cannoneers, one of whom, the gunner, should be a corporal.

The number of drivers is determined by the number of mules necessary to carry the gun and ammunition.

The Japanese carry 9,600 rounds with each gun, the amount carried in the ammunition wagon is not known. The Austrians have decided on 5,000 with the gun and 10,000 in the ammunition wagon.\*

Captain Victorin deduces from the experiences of the Russo-Japanese War 5,000 as the correct number to be carried immediately with each gun.† Apparently five or six thousand is sufficient. This would take four mules per gun, which, adding the gun mule, would make five drivers, giving a section of one corporal (gunner) and ten privates, (five cannoneers, five drivers). To take charge of the led animals, to exercise supervision over the property of the platoon and, when the platoon is acting independently, to perform the duties of first sergeant and quartermaster sergeant, one sergeant is necessary.

To enable the platoon to act independently, one cook, one blacksmith, and one saddler are necessary; these men can also be used as a guard for the led animals, and to lead extra horses and mules, and the mule carrying blacksmith, saddlers tools, etc., considered necessary for each platoon.

To prevent the platoon becoming a burden to other organizations, to enable the platoon commander to act without fear of surprise and to prevent the platoon, when in action, from being annoyed by the enemy's sharpshooters, scouts who are sharpshooters are required. From experience gained in garrison and department maneuvers it has been found that at least four are needed, two of whom can act as range finders when a position has been decided upon. One of these men should be a corporal.

For use as a messenger and horse holder for the platoon commander one man is necessary and as the need of a trumpeter is occasionally felt, this man should be a trumpeter. A mechanic to take care of the guns is necessary; his duties would not prevent him from acting as a cannoneer or driver,

\* Pages 458 and 459, *CAVALRY JOURNAL*, October, 1908.

† Pages 121 and 122, *CAVALRY JOURNAL*, July, 1908.

thus saving one private. This gives for one platoon of two guns:

- 1 lieutenant, commanding,
- 1 sergeant, chief of led animals, etc.,
- 3 corporals (2 gunners, 1 scout and range finder),
- 1 saddler,
- 1 blacksmith,
- 1 farrier,
- 1 cook,
- 1 mechanic (to act as driver or cannoneer),
- 1 trumpeter,
- 22 privates (10 cannoneers, 9 drivers, 3 scouts and range finders).

Total:

- 1 officer,
- 32 enlisted men,
- 36 horses (32 for enlisted men, 2 for officer, 2 extra),
- 12 mules (5 for each section, 1 supply, 1 extra).

This number may be objected to by some on the grounds that at present there are allowed but twenty-one men for a platoon of two guns. Aside from the fact that the Russo-Japanese War has shown the necessity due to large losses\* for men in reserve to take the place of disabled cannoneers, the experience of most platoon commanders will probably bear out the statement that even with the platoon kept filled up to the authorized number and all men attending drill,† except the guard, sick and confined, it is often so reduced as to almost prevent the proper handling of the guns.

The troop to consist of three platoons, its personnel would consist of three times that of the platoon with certain additions and exceptions.

It should be commanded by a captain and, as it is undesirable to increase the proportion of lieutenants to captains, instead of three lieutenants it is considered that two (one first and one second) are sufficient. One platoon always remaining with the captain, it can be commanded by the first sergeant. A first sergeant and quartermaster sergeant are

\* Page 97, Reports of Military Observers Attached to the Armies in Manchuria during the Russo-Japanese War, Part V.

† The platoon of the Thirteenth Cavalry has been kept filled at all times, the men not being available for detail on either extra or special duty.

of course necessary. To prevent the number of corporals in proportion to the number of sergeants being too large, the non-commissioned officer of scouts in one of the platoons should be a sergeant instead of a corporal.

To furnish a reserve of ammunition there should be one ammunition wagon permanently attached to and part of the equipment of the troop. To operate the belt filling machines in this wagon and to drive it four privates and a non-commissioned officer, one considered necessary, one private to drive, three to operate machine, the non-commissioned officer in charge.

To equalize the number of sergeants and corporals this non-commissioned officer should be a sergeant. As, under the present pay bill, it is desirable to have the troop quartermaster sergeant mess sergeant, so that he may draw the extra pay, and as it is too much for him to have charge of all property, the kitchen and the stables, this ammunition sergeant should also be stable sergeant and have the grade and pay as is done in the field artillery.

To care for and set up the aparejos there should be a trained cargador or packer. To assist the stable sergeant and help care for the wagons in the field, one wagoner is considered necessary; the troop would then consist of

- 1 captain,
- 1 first lieutenant,
- 1 second lieutenant,
- 1 first sergeant,
- 1 quartermaster sergeant,
- 1 stable and ammunition sergeant,
- 4 sergeants (3 platoon, 1 scout),
- 8 corporals (6 gunners, 2 scouts),
- 1 packer,
- 3 cooks (1 chief, 2 assistants),
- 3 farriers (1 chief, 2 assistants),
- 3 saddlers (1 chief, 2 assistants),
- 3 blacksmiths (1 chief, 2 assistants),
- 1 wagoner,
- 3 mechanics (to act as drivers or cannoneers),
- 3 trumpeters,
- 70 privates (30 cannoneers, 27 drivers, 9 scouts and range finders, 4 ammunition),



Total.....105 enlisted men, 3 officers.

117 horses (105 for enlisted men, 6 for officers, 6 extra),

40 mules (5 to each section, 3 supply, 3 extra, 4 to the ammunition wagon).

In the total number of men and horses, proportion of non-commissioned officers and others to privates this organization is quite similar to that of a troop of cavalry, as will be seen by the following table :

	<i>Officers.</i>	<i>Sergts.</i>	<i>Corpls.</i>	<i>Cooks, etc</i>	<i>Pvts.</i>	<i>Total.</i>	<i>Horses.</i>
Machine gun platoon . . .	3	7	8	20	70	108	117
Troop . .	3	8	8	8	76	103	112

The apparently, at first sight, large number of men other than non-commissioned officers, cannoneers and drivers is not any too many to care for the supply mules, extra mules and horses with the light train, the ammunition wagon, the two escort wagons, which should be supplied by the quartermaster, as is done for a troop of cavalry, act as guard to the led horses, find ranges, act as scouts and sharpshooters, and to furnish above all the reserve necessary to replace disabled cannoneers and drivers.

To reduce this to a peace basis the following could be dispensed with until the army is put on a war footing :

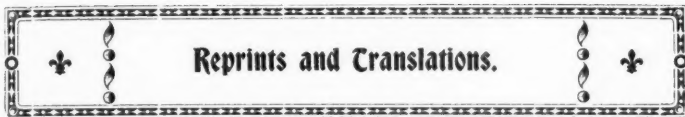
- 1 sergeant (scout),
- 4 privates, ammunition,
- 5 privates, scouts,
- 10 privates, drivers (using blacksmiths, farriers, etc., instead).

Total—20 enlisted men.

- 26 horses (20 for men, 6 extra),
- 3 extra mules.

This would put the strength of the company at  
85 enlisted men and 3 officers,  
91 horses,  
37 mules.

If any further reduction should be contemplated, from experience had with the platoon of the Thirteenth Cavalry, it is considered that it would be better to do away with one complete platoon, leaving but two in peace and those at practically a war strength, not only to secure the proper training which it is not considered can be done with a six-gun troop of less than eighty or eighty-five men, but also to prevent the men from having so much work as to give them just cause for dissatisfaction.



## RAID OF THE CONFEDERATE CAVALRY THROUGH CENTRAL TENNESSEE.

Commanded by General JOSEPH WHEELER (October, 1863).

BY CAPTAIN WILLIAM L. CURRY, FIRST OHIO CAVALRY.

TWO days after the battle of Chickamauga, fought September 19 and 20, 1863, the Second Cavalry Division, Army of the Cumberland, commanded by General George Crook, entered Chattanooga, forded the Tennessee River and went into bivouac opposite the town.

The division crossed the Tennessee to the south, some distance below Stevenson, Alabama, September 2d, and had been in the saddle continuously for twenty days. The horses were much jaded and had great need of shoeing and rest. The troopers were worn out, uniforms, arms and equipments required repairs and renovating.

We had not seen our wagon train for a month, and the officers, not having a change of clothing during the campaign, were neither comfortable nor presentable.

It was hoped that we would at least get a few days rest, but we were doomed to disappointment, for in two days we were destined to start on another hard campaign, which, up to that time, had not had a parallel in the annals of the cavalry service of that army.

The division was composed of nine regiments of cavalry and one battery of artillery.

### FIRST BRIGADE.

Commanded by Colonel Robert H. G. Minty.

Third Indiana—Lieutenant Colonel Robert Klein.

Fourth Michigan—Major Horace Gray.

Seventh Pennsylvania—Lieutenant Colonel James S. Seibert.

Fourth United States—Captain James B. McIntyre.

Chicago Board of Trade Battery (one section)—Captain James H. Stokes.

#### SECOND BRIGADE.

Colonel Eli Long commanding.

First Ohio Cavalry—Major Thomas J. Patton.

Third Ohio—Lieutenant Colonel Charles B. Seidel.

Fourth Ohio—Lieutenant Colonel Oliver P. Robie.

Second Kentucky—Colonel Thomas P. Nicholas.

Chicago Board of Trade Battery (one section)—Captain James H. Stokes.

The Second brigade had been handled pretty roughly during the last day's battle of Chickamauga, having lost 136 men out of a total of 900.

Colonel Valentine Cupp, the brave commander of the First Ohio, had been killed and a number of other officers of the brigade had been killed or wounded, among whom was Lieutenants Neff, Cilly and Henry, Fourth Ohio, and Captain Zacharay and Lieutenants Griffith, Ayres, Calder and Brooks of the Second Kentucky.

Major Thomas J. Patton, familiarly called "Rough and Ready Tom," who was never so happy as when in the "mêlée," on the death of Colonel Cupp had succeeded to the command of the First Ohio. In some of the regiments new faces were at the head of companies, squadrons and battalions, for not only had the ranks been decimated, but many officers were "*hors de combat*."

There was many a trooper who longed to see the old officers riding at the head of their commands, but the young leaders commanding had all been tried in the fire of battle and had not been found wanting—all as true as steel.

The first brigade, Second Cavalry Division, commanded by Colonel R. G. Minty, fought on the extreme left during the battle of Chickamauga and were hotly engaged. Colonel

Minty, in his report, states that the loss of the brigade during the campaign was less than one hundred.

The situation was critical, as rations, ammunition and all kinds of supplies were short, and it was a question whether Rosecrans could hold Chattanooga.

The enemy commanded the main part of the river road from Bridgeport to Chattanooga, and all supplies had to be hauled by wagon over a long rough route through the Sequatchie Valley and across Walden's Ridge. Rosecrans himself, a discrete and wily strategist, knew his astute antagonist well and fully realized that Bragg would make a supreme effort to cut off the "cracker line" of the Union Army at any sacrifice.

Rosecrans, anticipating a cavalry raid on his line of supplies, made rapid disposition of his cavalry to meet and frustrate the enemy, should such an expedition be undertaken. General Joseph Wheeler, Commander of General Bragg's cavalry corps, was ordered to equip his command for such an expedition and he rapidly concentrated all his available cavalry, being reinforced by a division of General Forest's command.

General Rosecrans, through General George H. Thomas, who had charge of the secret service of the Army of the Cumberland, was kept informed of these movements of the enemy. To General Ed. McCook, commanding the First Cavalry Division, was assigned the duty of guarding the river below Chattanooga toward Bridgeport.

General Crook, commanding the Second Division, was ordered to patrol and guard the river to the northeast and resist any effort of the enemy to force a crossing, as it was thought the movement would be made by the left flank of our army.

At dawn, September 26th, "boots and saddles" were sounded, and with "five days' rations in their haversacks," the Second Cavalry Division, with blast of bugles and guidons fluttering in the balmy September breeze, left their bivouac near Chattanooga armed and equipped and ready to scout, raid or fight.

On the 28th we arrived at Washington, a little cross-road town about fifty miles from Chattanooga and three miles distant from the Tennessee River. Here General Crook established his headquarters and distributed his command along the river near the many fords that could be easily crossed by cavalry at this season of the year.

The country was very rough near the river with bluffs, hills and ravines, and in many places heavily timbered. The patrol duty was very laborious and difficult, and the fords, thus screened, could be easily crossed by the enemy unobserved during the night time. Wheeler's forces made several feints which were intercepted by our cavalry, but on the night of the 29th they forced a crossing at Cotton Port, three miles from Washington.

This ford was guarded by a battalion of the First Ohio, commanded by Major J. W. Scott, who made a strong resistance, but the enemy opened up with a battery and he was compelled to fall back with a loss of about twenty men, wounded and taken prisoners, including Captain Conn, severely wounded.

The rebels surrounded a picket post of the First Ohio and sent in a flag of truce, demanding their surrender, but instead of surrendering they made a dash through the lines and made their escape.

The battalion in which I commanded a company of the First Ohio was stationed at a ford about three miles north of Cotton Port, where the principal part of Wheeler's command crossed. On hearing the artillery firing the morning of the 30th, we mounted and prepared to resist an attack which was momentarily expected at the ford we were guarding. In a few minutes a staff officer dashed up with orders for the battalion to report at Washington at once.

We moved out at a gallop and in half an hour we arrived at division headquarters. General Crook, surrounded by his staff, was mounted and all was excitement. Crook was giving orders to his brigade commanders, staff officers and orderlies were galloping off on the several roads carrying orders. The artillery was ready for action — companies, battalions and regiments were swinging into line, and horses, as

well as officers and troopers, seemed to imbibe of the general feeling that there was fight in the air. There was a thrill in that hour of preparation and concentration of troops that is indelibly stamped on the memory of every survivor of Crook's cavalry division who rode across the State of Tennessee in pursuit of Wheeler's bold raiders.

As soon as Wheeler's command crossed the river they moved rapidly down the valley toward Chattanooga. Crook concentrated his scattered forces as rapidly as possible and started in pursuit. We only marched about ten miles, passing Smith's Cross Roads on the 30th and bivouacked for the night in a drenching rain which continued until morning.

On the morning of October 1st we took the pass up Raccoon Mountain, reaching the top of the mountain at dusk and bivouacked with rain pouring in torrents all night. Colonel Miller, commanding a brigade of mounted infantry, did not reach the crest of the mountain until the morning of the 2d, and that morning we descended the mountain into the Sequatchie Valley at Pitt's Cross Roads. At this time the enemy had from twelve to fourteen hours the start of Crook's Division. Wheeler had divided forces, a division crossing the Cumberland Mountains by way of Pikeville, while the balance of his command marched down the valley toward Dunlap and, as was afterwards learned, ascended the mountain from that point. Of these movements of the enemy Crook kept well informed through his scouts and prisoners captured.

On the afternoon of the 2d we took Robinson's trace up the Cumberland Mountains and reached the top about midnight. The pass was very difficult, and both men and horses were very much exhausted by the hard night march. We were in the saddle at daybreak and marched rapidly across the mountain, descending late in the evening. Had some skirmishing during the day with the enemy's rear guard, and on descending the mountain struck the enemy in strong force and had some sharp fighting, lasting about two hours, and drove the enemy, which proved to be a brigade of Crew's Texans and Martin's division, about three miles until the dense darkness prevented further pursuit. The loss in

Crook's division was forty-six killed and wounded. Miller's brigade, armed with their Spencer seven shooters, had the advance and bore the brunt of the fight. The roar of their rapid firing guns, with the bright flashes, presented a magnificent scene in the darkness. No doubt the loss of the enemy was heavy, but could not be ascertained. Crook had Crew's brigade completely surrounded with dismounted cavalry and infantry, but darkness coming on our men could not distinguish the enemy from our own forces and were afraid to fire when the enemy commenced breaking through our lines. As our men were under cover and the enemy in the open, if there had been another hour of daylight Crook would have destroyed or captured a large part of Crew's brigade.

Having left Chattanooga September 26th with five days' rations, and this being the seventh day out, our rations were all exhausted. As we halted on the mountain during the day, the men cut down many chestnut trees to get the chestnuts to eat.

The next morning our breakfast consisted of about two little hard sour apples to the man in my own company, and we considered ourselves fortunate at that, as but few troopers in the command got even that much. One of Napoleon's maxims of war was that to get good fighting out of a soldier, good care must be taken of his stomach. In this instance the maxim of the great warrior seems to have been overlooked by our commander, but presume his rations was about the same as the balance of the command. As we had the enemy on the run, with a prospect of a fight every day, this kept the command in buoyant spirits, notwithstanding the short rations.

Looking back after a period of forty-five years has elapsed, it seems almost incredible that soldiers could have stood such service, subsisting on such meager rations, the enemy having stripped the country of provisions as they advanced.

Crook had now driven Wharton's command over two high mountain ranges, but Wheeler, with the balance of his forces under his immediate command, had been having a hot time in the Sequatchie Valley. He had marched rapidly down



the valley and at Anderson's Cross Roads attacked a large wagon train hauling supplies for Rosecran's Army at Chattanooga. There were from 800 to 1,000 wagons and ambulances in the train. The light train guard of cavalry and infantry put up a good fight but were driven from the train into the woods by the overwhelming numbers of the enemy, but not until they had unhorsed a large number of Wheeler's troopers. Wheeler's men commenced selecting out the best teams and wagons, then proceeded to kill many of the mules, burning the other wagons with supplies. When it was learned that Wheeler's forces had crossed the Tennessee and were marching down the Sequatchie Valley, anticipating his designs on the supply train, Colonel Ed McCook, commanding the First Cavalry Division, guarding the river south of Chattanooga, was ordered to move rapidly with his command up the valley to meet the enemy. As has already been stated, it had been raining heavily and the roads were almost impassible for artillery in many places, so that his movements were very much impeded.

On October 2d, he struck Wheeler's command at Anderson's Cross Roads, where they were busily engaged in plundering the train, killing mules and burning wagons. The First Wisconsin and Second Indiana Cavalry charged into the enemy with the saber and drove them in much confusion from the burning train, capturing many prisoners and releasing some of our prisoners. Wheeler rallied his men and made an effort to stem the tide, but McCook's men again charged his lines with saber, driving his forces rapidly across the Sequatchie Valley all the afternoon, although he made several ineffectual efforts to hold the Union forces in check. Darkness approaching, McCook waited for the balance of the division to join him under Mitchell, commander of the cavalry corps.

During the night of the 2d Wheeler pushed on rapidly, crossing the Cumberland Mountains in the direction of McMinnville. The sudden and impetuous attack of McCook so demoralized the Confederate cavalry that they were compelled to abandon much of their booty. Many of the mules and wagons with supplies were saved and a number of drivers and

quartermaster employees came into our lines mounted on mules which they had cut loose from the wagons, riding bare-back, minus hats and coats, and in rather a dilapidated condition. They gave us information of the destruction of the wagon train. When in the valley near Pikeville, the day of the attack on the train, we had heard the explosion of the shells and supposed at the time that a battle was in progress at Chattanooga.

On the morning after the night fight at the foot of the Cumberland Mountains Crook's men were in the saddle at daybreak and moved on toward McMinnville, striking the rear guard of the enemy about noon, charged them three or four miles, capturing many prisoners, and recapturing some of our men. Captain Wm. Scott and Lieutenant A. D. Lieb of the First Ohio had both been taken prisoners while carrying orders for the concentration of Crook's division the day Wheeler crossed the river.

Captain Scott made his escape during the night fight on the evening of the 3d and came into our lines. He had been under guard by Crew's Texans and the captain in command became so enraged at Scott's language, berating the Confederates and their cause in language more emphatic than polite, compelled Scott to walk and keep up with the rapid marching cavalry column under penalty of death.

On the morning of the 4th Scott, who was one of the bravest little Irish officers in the command, secured a horse and moved out with the advance, swearing dire revenge. In the first charge among the prisoners captured was this same Texan captain. He was mounted on a large mule and was a fine looking officer. Scott at once took him in charge, made him dismount, and as we passed them Scott was compelling him to empty a large pair of saddlebags, fastened to the cantel of his saddle, filled with blue uniforms taken from the supply train in the valley.

The brave Texan looked very much chagrined while the little Irishman was looking on, taking a grim satisfaction in the proceedings. It is safe to say that the Texan had to take his turn at hoofing it that day. This is but a little in-

cident showing what changes are wrought in the fortunes of war.

We drove the enemy's rear guard rapidly through McMinnville and found that the garrison, composed of about 500 new Tennessee recruits, commanded by Major Patterson, had surrendered with but little resistance. Major Patterson claimed that he lost about forty men, killed, wounded and missing. Wheeler captured many horses and mules and destroyed a large amount of government stores, a train of cars, cut the telegraph wires, destroyed a railroad bridge over Hickory Creek, sacked the town, then pushed on toward Murfreesboro.

As this was Sunday, it disturbed the good citizens of this quiet mountain town in their devotions, but as there were many Union citizens in the town and surrounding country, they hailed with delight the advance of Crook's men. General Crook states in his report that he learned from reliable and intelligent Union men that Wheeler had about 6,000 men in his command, as his full force was concentrated when he descended the Cumberland Mountains. Crook's command numbered at that time about 3,500 effective men.

We struck the enemy's rear guard about three miles from McMinnville and had a sharp skirmish.

The Second Brigade having the advance, Colonel Long, the brigade commander, at the head of the Second Kentucky, made a saber charge, driving the rear guard pell mell four or five miles, capturing many prisoners. The rear guard was so hard pressed that a large force of the enemy halted and formed a line of battle. Crook attacked with dismounted infantry and drove them steadily back. Stokes' battery was also brought into action and a very pretty and exciting artillery duel was kept up for some time. Captain Stokes was particularly distinguished in this fight and soon knocked the Confederate battery out of action. The enemy left the field hurriedly and, darkness coming on, we bivouacked on the field for the night. As we did not have any rations, we laid down supperless, our heads against the roots of pine or cedar trees and slept as soundly from sheer exhaustion as if our heads had been on downy pillows, perchance to dream of the

feast of chestnuts we had enjoyed the day before, not forgetting the luscious sour apples on which we breakfasted. The horses fared better than the men, as there was abundance of corn in the coves and valleys well ripened and more than the horses of Wheeler's command could consume, as we were driving them so rapidly, but all kinds of provisions in their line of march was confiscated. To have forage for his horse was a great comfort to the good cavalryman, as he would fight for forage for his horse and go hungry without any grumbling in the excitement of a raid.

The morning of the fifth we mounted in "hot haste" and again took the enemy's trail, as they had escaped from us during the night.

Crook getting information through his scouts that it was Wheeler's intention to capture Murfreesboro, then destroy the railroad toward Nashville, decided to make a flank movement to thwart Wheeler's plans; thereupon Crook made a rapid move to the right from Readyville, thus throwing his forces between the enemy and Nashville, compelling him to move in a southwesterly direction toward Shelbyville.

We reached Murfreesboro about 4 o'clock, having marched upward of forty miles. The two regiments of infantry forming the garrison, with all citizens of the town, were in Fortress Rosecrans, which had been constructed for the protection of the large amount of rations stored.

The garrison was well prepared for the expected attack by Wheeler's forces, and had the attack been made he would undoubtedly have been repulsed with great slaughter. The citizens were greatly alarmed and hailed the advance of Crook's command very cordially. Wheeler's men, under Martin, had made a stubborn resistance all day, forming dismounted along the edge of woods, streams and hills wherever there seemed to be any kind of screen or protection from which they could resist Crook's charging troops.

After entering Murfreesboro, it was found that some of the enemy was hovering around the outskirts of the town toward Shelbyville, taking observations, but evidently afraid to make an attack. A little dash from one of our regiments sent them scurrying off on the gallop, and we were glad to

halt for a much needed rest. The garrison was so overjoyed that they were willing to serve the men of Crook's command in every possible way, and hundreds of rations were issued without requisitions. In fact, the men entered the commissary department and carried away hams, shoulders, bacon, hard-tack and whatever they cared to take while the guards looked on smiling, offering no objections. The officers were directed to make the best disposition possible for the comfort of their men, and the second brigade camped in the town. Fires were soon blazing out on the commons and in some instances even in the streets. We had not had any rations for five days, and we were about famished. The men were cautioned not to eat too fast or too much. But little regard was paid to this precaution, as fires were burning and the men were cooking all night. Forage was issued, horses were unsaddled, and many lay down on the streets among their riders. General Crook gave imperative orders that private property must not be in any manner disturbed, and that he would hold the officers strictly accountable for any violation of the order. There was no necessity for a very vigilant picket during the night, as the enemy was as tired as our own men and were not anxious for any more fighting, but were more anxious to get away from Crook's command which was pushing them so hard.

The next morning, the 6th, we drew some clothing from the post quartermaster for the men who were most needy, and with well-filled haversacks marched about ten miles toward Shelbyville, but did not strike the enemy, and here General Mitchell joined Crook with the First Cavalry Division. That afternoon we lay in bivouac while Crook's scouts were busy locating the enemy.

Although we captured many horses from the enemy, we did not secure a sufficient number to mount our own men whose horses had given out and had to be abandoned. When we left Murfreesboro about 500 of Crook's men were left there dismounted. The blacksmiths were busy on the afternoon of the 6th shoeing horses, as there had been but little time for shoeing since the 1st, and all the blacksmiths could do was to nail the shoes on without fitting.

The morning of the 7th we marched into Shelbyville, a beautiful little town situated on the banks of Duck River. There was a strong Union element in the town and Colonel Galbrath, who commanded a Union cavalry regiment of Tennesseans, resided there. The Union forces had been in possession of that section of the State for so many months that business had been resumed by the merchants. It seemed that Wheeler's men took great delight in destroying and plundering, had stripped the business houses of everything and had the citizens terrorized when he entered the place. The prisoners captured that day were loaded down with bolts of dress goods, muslins, ribbons and even many ladies' bonnets which they had to abandon with many regrets.

The divisions of Lee and Roddy had been ordered by Bragg to join Wheeler, coming by way of Guntersville and New Market, Alabama, but they failed to arrive at Shelbyville as Wheeler had expected. Martin's division captured a small garrison at Watrace, burning two or three bridges, and had joined Wheeler's main force at Shelbyville. This was the situation on the morning of the 7th when we arrived.

Crook's division moved out on the Farmington road, while McCook moved on the Unionville road, on the right bank of Duck River. Crook learning through his scouts that Davidson's Division was in line only a few miles from Shelbyville, with his usual energy and eagerness for a fight, ordered the Second division forward rapidly, and about three miles out struck Davidson's division. The mounted infantry having the advance, moved to the attack mounted, opening a sharp fire, and the enemy fell back into a wood. The infantry then dismounted and delivered several volleys, driving the enemy in considerable confusion. The Second Brigade was ordered to the front and, headed by Colonel Long, made a saber charge, driving the enemy three miles, killing and wounding many of them, and capturing a large number of prisoners. We then halted for a short time, waiting for the troopers, who had dropped behind by reason of jaded horses, to close up, also to allow the guard to come up with the prisoners and let our horses blow. We halted perhaps twenty to thirty minutes, and during that time our men gathered sev-

enty of the enemy's wounded from the woods, some of whom had saber cuts, and laid them down on a little green grass plot shaded by trees on one side. Here our surgeons dressed their wounds and worked earnestly and rapidly until we were again ordered forward. The enemy soon made another stand in a cedar thicket and again the infantry dismounted, made the attack, routing them, and the Second Brigade followed up with another saber charge, driving them back rapidly in every attack. This mode of attack was kept up for fifteen miles, and during all of that distance we were scarcely out of sight of dead and wounded men, and many wounded and abandoned horses were scattered along the roadside. There was plenty of hard fighting, but to Crook's men it was one continuous forward movement, for the enemy was on the run the greater part of the time, although they made several desperate efforts to hold Crook's now wild and impetuous rough riders in check. A short distance from Farmington, Wheeler, having concentrated his whole command in a strong position in a dense cedar thicket, prepared to make a last desperate defense with his men largely dismounted. Crook at once made the attack with the infantry, as the cavalry could not operate in the thickets, except dismounted. He, therefore, decided to use the same tactics he had been practicing all day. The enemy opened with a battery at a distance of 400 yards with a raking fire of grape and canister, then charged from the front and on both flanks, but were repulsed. The fire from their battery was terrific, the grape, canister and shells tearing through the thick brush sounded like a great tornado.

Captain Stokes' battery was brought into action at this critical time, and before he could get his guns into position the enemy turned their battery fire against him, killing and wounding several men and horses. Captain Stokes took charge of one of his guns, sighting the piece himself, and about the second or third shot knocked one of the enemy's guns out of action by blowing up a caisson; Crook's infantry dismounted, raised the Yankee Yell and charged, breaking through the enemy's lines, driving them in great confusion, capturing the battery and a large number of prisoners.



Long's brigade was then ordered to charge, and, galloping to the front through the lines, passed the captured battery and prisoners, but a short distance from the village found the roads heavily barricaded, manned by dismounted cavalry.

It was now growing quite dark and we were ordered to dismount, but before we could make the attack on the barricades, Colonel Long was ordered to halt and abandon the pursuit.

As Colonel Minty failed to reach the field with the First Brigade until after the fighting had ceased, Crook had but Long's brigade and a brigade of mounted infantry. As Crook states in his report, he had but 1,500 effective men. No other troops had been in action during the day, and it had been almost one continuous fight from Shelbyville to Farmington, a distance of fifteen miles. The prisoners were rounded up and surrounded by a guard. The captured battery and caissons, to which were attached mules instead of horses, was parked in the village square. Then we went into bivouac, discussed the victories of the day over our coffee and hard-tack for a short time, cared for the wounded, wrapped our blankets about us, for the night was cool, and were soon in deep slumber. It was a "red letter day" for Crook's command. It was "up and at them, boys," all day. No time to think of thirst or hunger. No time to think of being tired and exhausted. It was "mount and dismount," then on to find the enemy and hit him another hard blow. We kept no count of time, the hours flew like minutes; although the physical strain had been almost to the limit of endurance, it seemed that darkness came all too soon. A few saddles had been emptied and their riders were not present at "mess" that evening, but had fallen, "booted and spurred," with drawn sabers and faces to the foe.

A few years ago I met in the city of Columbus, Ohio, a Rev. Montgomery, president of a Presbyterian College. In the course of conversation he mentioned that he was born in the State of Tennessee. On inquiry he stated that his father lived near Farmington during the Civil War, and I then mentioned the battle that occurred at that village in the fall of 1863. He said he had heard his father relate the



story of the battle many times. They resided but three miles from Farmington and heard distinctly the rattle of musketry and roar of artillery. His father visited the battle ground early the next morning and assisted in caring for the wounded and burying the dead. His father, in telling of the scenes, spoke of the dead soldiers lying on the field with upturned faces, the drops of dew on their brows glistening in the bright October sun. He said this made such a deep impression upon his young mind that he always associated this incident with every story of battle or battlefield.

Among the killed was Colonel Monroe of the One Hundred and Twenty-third Illinois Infantry, a brave and skillful officer who had rendered most efficient service throughout the campaign. Crook's loss in this fight was forty-one killed and wounded.

McCook's division, which had taken the road to the right, did not find any enemy and did not have any fighting during the day.

The next morning, the 8th, it did not take but one note of the reveille to bring us to our feet. At 4 o'clock, and after a hasty cup of coffee and a hard-tack, with little grooming of horses, we were in the saddle. Crook claimed in his report, that if the balance of the command had been on time, as he expected, he would have thrown them on the flanks and would have "captured a large portion of Wheeler's command with all of his artillery and transportation." Crook made the fight with this small force against Wheeler's whole command, and not only captured a battery, but nearly half as many prisoners as he had soldiers in action. Crook had sent out his scouts during the night in all directions to ascertain the movements of the enemy, and learned through them that a large portion of the enemy had retreated on the Pulaski Road. We marched at once on the Pulaski Road, passing through the towns of Lewisburg and Connellsville.

All day we had evidences of the complete rout of the enemy in abandoned baggage, broken wagons, broken down horses, with now and then a few stragglers picked up. All showing the complete demoralization of Wheeler's whole command.

Many of his wounded men were left at farm houses along the road, while squads were deserting his columns, scattering over the country in an effort to escape. We arrived at Pulaski about sundown and just in time to see their rear guard galloping out of town, only firing a few shots.

The First Ohio had the advance, and we galloped through the town and went into bivouac about a mile from the village, on the Lambs Ferry Road. My own company was detailed for picket and were posted in a dense woods, and did not close an eye that night after our hard day's march. Fearing that the men, being so exhausted, might fall asleep, I ordered them to stretch a picket rope across the narrow road fifty yards in advance of the videttes, so that in the event the enemy should make a dash on the pickets, the rope would give them a little check, but the night passed quietly without any demonstrations on the outposts. The advance of Crook's column passed the outpost early on the morning of the 9th, and moved rapidly out on the Lambs Ferry Road, leading to the Tennessee River. We did not strike the enemy until we reached Sugar Creek, and here we found a brigade, posted in a strong position to delay the advance until Wheeler's main force would be safely across the Tennessee. But we gave the brigade a surprise they were little expecting, for instead of fighting them at long range, Crook ordered a saber charge by his advance brigade, and Lieutenant Colonel Patrick, commanding the Fifth Iowa Cavalry, led a most gallant charge with his regiment, killing ten, wounding nine and capturing upward of seventy prisoners, utterly scattering and demoralizing the whole brigade. From that time on it was simply a race for the river. For the last six or seven miles we were on the gallop and gathered up many stragglers whose horses had given out, many others of the enemy, who could not keep up with the column, fled to the woods and mountains. No further resistance was offered and when we reached the river we found the enemy had crossed at a ford just above where Elk River enters the Tennessee. We went into camp at Rogersville, four miles from the Tennessee, on the evening of the 9th, after a continuous campaign in the saddle, marching and fighting since

the morning of September 30th, or ten days in all, and had driven Wheeler's forces clear across the State of Tennessee. Quoting from my diary, I find the following entry on the evening of the 9th: "We hope to get a few days' much needed rest, as both horses and men are much jaded. Hundreds of campfires are burning to-night, the camp is ringing with shout and song, the boys all feeling happy over the success of the campaign." This was the hardest continuous ten days' riding and fighting in which the Second Cavalry Division participated during the war, and the results were of the most satisfactory.

We had struck the Confederate cavalry such a hard blow, under their most able and dashing leader, that Rosecrans in Chattanooga had no fears that his communication would be interrupted by another cavalry raid, and he felt secure. We remained in camp at Rogersville on the 10th, and on the 11th broke camp and marched by easy stages toward Chattanooga, reaching Paint Rock, Alabama, on the 19th, went into camp for a few days' rest.

#### SUMMING UP LOSSES AND RESULTS.

The best evidence we have is from the reports of the different commanders at the time.

Crook stated in his report that his total loss during the raid was, in killed and wounded, 111. Referring to the loss of the enemy, he stated that, "at the battle of Farmington the enemy left 86 of their dead and 137 wounded on the field, while many of their wounded were taken up by citizens." He gives the total loss of the enemy during the raid at upward of 2,000 in killed, wounded and prisoners, and some of the officers in their reports estimated the loss at from 2,500 to 3,000. In closing his report he pays a high tribute to the bravery and endurance of the officers and men of his command, as follows: "Notwithstanding the severe hardships and fatigue under which the men suffered, having but three days' rations in twenty days, many of them nearly naked and several times exposed to cold, drenching rain, yet they never complained, but were always cheerful and ready for duty."

Extract from report of General R. B. Mitchell, commanding First Cavalry Corps, Decherd, Tenn., October 20, 1863: "I think the record of cavalry service during the entire war can not show a more severe campaign than the one my command has just closed. There was scarcely an hour during the whole pursuit that the horses were unsaddled; for days and nights together the men were in their saddles, almost constantly on the march, and some days making as high as fifty-three and fifty-seven miles. Take again into consideration the fact that a greater part of the time the troops were out of rations, and our hasty movements giving them little or no time to forage on the country; that the nights were cold, the men without overcoats; I think the campaign challenges comparison with any service performed during the war. Yet, with all the severe duty and hardships necessarily devolving upon the men, they made not a murmur, but, on the contrary, seemed only anxious to do everything in their power to accomplish the object for which they had started, viz.: to overtake and, if possible, destroy the enemy's cavalry, and whenever we did succeed in reaching them they proved that they were ready and competent to do this.

"The troops in the command did all that it was possible for troops to do to second the endeavors of their commanders, and when I thank them, as I do, for the fatigue and gallant fighting which they did, I do it in all earnestness and sincerity, realizing their labors and sufferings."

General Mitchell gives the total losses in the First Cavalry Corps at 120. Of this number there were 110 in Crook's division, nine in the First Division, and one at headquarters. While the men of McCook's division were just as anxious to get into a fight as were Crook's men, yet they were not so fortunate in finding the enemy.

Extract from report of General D. S. Stanley, Chief of Cavalry:

"At Farmington Crook captured five pieces of artillery and 700 prisoners, and the enemy's loss will amount to 2,000. \* \* \* We have marched in six days 247 miles. We captured and burned \$52,000 worth of cotton belonging to the Confederate States Army."

CONGRATULATORY ORDER OF MAJOR GENERAL WM. ROSECRANS,  
U. S. ARMY, COMMANDING DEPARTMENT OF THE  
CUMBERLAND.

"The brilliant pursuit of the enemy's cavalry under Wheeler by the cavalry command of this army, especially Crook's division and Stoke's Chicago Board of Trade Battery, which were foremost in the fight, deserve honorable mention. The general commanding thanks the cavalry, and particularly General Crook, with the officers and soldiers of his division, and of Stokes' battery, for their valuable services in this pursuit of the enemy, which resulted in driving him in confusion across the Tennessee River. He compliments them for inaugurating the new practice of coming to close quarters without delay." By command of Major General Rosecrans, H. M. Cist, Lieutenant and Acting Assistant Adjutant General.

Extract from report of General George H. Thomas :

"This pursuit is unsurpassed for its energy and bravery and endurance of the officers and men engaged in it, and prevented the execution of an extensive plan of destruction of our communications, plunder and murder throughout Middle Tennessee and Northern Alabama, in which Roddy and Lee were to coöperate with Wheeler." Wheeler had planned this raid on a grand scale and the results were no doubt very disappointing to him as well as to Bragg, the commander of the Confederate army. Had he succeeded in repelling Crook and establishing his command on the railroad between Murfreesboro and Nashville, destroying the bridges and road between those points as well as toward Chattanooga, Rosecrans' army would have been in a critical situation. But in this he failed as he found in Crook and Long, both Indian fighters of the Regular Army, "foemen worthy of his steel," and they foiled him at every move on the board with persistent energy, dash and fight. Had he been confronted with commanders that could not have anticipated his every plan and move, as did Crook, he might have succeeded, but Crook was master of the situation and had the full confidence of his officers and men, and at Farmington, with less than half the men that Wheeler had in his command, swept him from the field.

All that Wheeler had to offset his great loss in men was the destruction of a few hundred wagons, some government supplies, a few small railroad bridges, which interrupted communication but for a few days and did not disturb our army in the least.

Roddy crossed the Tennessee and all the damage that he did was to fill up a tunnel near New Market. General Mitchell, having received information of this movement, made a rapid march from Huntsville and struck Roddy's command on the evening of the 12th of October, and after a sharp fight, in a heavy rain storm, darkness coming on, Roddy succeeded in crossing the Tennessee. General Wheeler censured his subordinate commanders severely for the lack of discipline and coöperation, to which he claimed his defeat was largely due. The story of the defeat and demoralization of his command is most graphically told by Col. George B. Hodges, who commanded a Confederate brigade. He describes the running fight between Shelbyville and Farmington as follows in his report:

"Within thirty minutes a courier reached me from Colonel Clay, asking for re-inforcements, being ordered by General Davidson to lead them and to take command of the rear in person. I countermarched with my brigade and was proceeding at a gallop with my command back, when, ahead of me, I encountered the whole of Scott's brigade, crowded in frightful and horrible confusion, wild and frantic with panic, choking the entire road and bearing down upon me at racing speed. It was too late to clear the way; they rode over my command like madmen, some of them stopping only, as I am informed, when they reached the Tennessee. I was ridden over and my horse knocked down, but succeeded in extricating myself, and Captain Larmer's company, Twenty-seventh Virginia Battery, which I threw into position behind a fence running at right angles with the road, and opened upon the enemy, who were fiercely charging the rear of the panic-stricken crowd. This company unhorsed and killed some thirty of the enemy who were in the leading files of the charging column, but was itself badly cut up, and its gallant

captain sabered out of his saddle. The enemy were momentarily checked. I seized the opportunity to gallop ahead of the fugitives and extricate my own brigade from the disorderly mob; this I formed line with, and in some order received the now advancing enemy. He came on in heavy force and with determined obstinacy. General Davidson sent me word he was endeavoring to form a fresh line with Scott's brigade to support and instructed me to use my own discretion in the rear. The enemy, finding himself determinedly resisted, brought up three pieces of artillery and commenced shelling my line. I could only reply with two mountain howitzers and was compelled to fall back, forming fresh lines at intervals of about a quarter of a mile. Each of these he desperately charged, and upon being repulsed commenced extending his flanks, which his numerical superiority enabled him to do, compelling me to form fresh lines in the rear and withdraw those he was enveloping.

"For five hours and a half, over seven miles of country, the unequal contest continued. My gallant brigade was cut to pieces and slaughtered. I had informed the officers and men that the sacrifice of their lives was necessary, and they manfully made the sacrifice.

"General Davidson could do nothing with the fugitives. I received no support, and at 3 o'clock, when with my bleeding and almost annihilated command I had formed my last line, the welcome order came from General Wheeler to fall back, as he was in position a quarter of a mile in rear with reinforcements. I passed at 4 o'clock through his lines into Farmington, but only to resume the retreat when, at 5, the division he had placed in position was charged and broken by the enemy. Though much of my brigade with its cannon, reached and crossed the Tennessee River at Mussel Shoals on October 9, one-third of my brigade had been destroyed. I have lost many of my best, gallant and efficient officers."

## PROPER TRAINING OF CAVALRY FOR WAR.

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A LECTURE BY MAJOR GENERAL BUXBAUM.\*

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IN battle there is but *one* task the cavalry has to perform. "The enemy in front is the obstacle which must be ridden down." The arm enabling the cavalry to gain the victory is never the lance or the saber, but the horse pure and simple; it, however, will be effective only if it strikes the enemy with the full force of the irresistible charge; for only then will the enemy be thrown and then only will the work of the saber commence. Nothing can withstand the charge of a compact line of horses, as anyone will concede who has observed the havoc wrought by a runaway horse striking a crowd of people.

The above is our well established theory, but what about practice? Supposing the enemy is of the same opinion as we are, then both opponents would be destroyed like two locomotives colliding, but military history furnishes no example of such a fact or happening. It records that in nearly all cavalry charges there was more or less running hither and thither; in short, the following appears to have been the practice: One part faces about before final contact; or both parties, at the decisive moment, entirely lose sight of the destructive quality of a charging mass of horses, parry, and try to defeat one another without resorting to the charge. On the whole, the charge is a moment of utter confusion; no one knows exactly what is happening; it is a question also whether the horses do not involuntarily decrease their speed and power at the decisive moment in spite of rein and spur and thereby neutralize the force of contact. And who can say with absolute certainty that he does not involuntarily pull on the reins at the moment when the two opposing forces are about to come into contact? Anyone who has not actually participated in a charge knows as little about it as a color-blind man knows about color; the many older

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\*Translated from "*Kavalleristische Monatshefte*" for December, 1908, by Sergeant Harry Bell, Service Schools Detachment.



officers whom I asked for information on the subject were not able to help me to gain a clear picture of it, possibly because in the very few seconds required for a charge there is no time for consideration, no time for events to impress themselves distinctly on our mind. A well known, high-ranking cavalry officer, who is looked upon as an authority on all matters pertaining to the cavalry, says: "Were it possible to cut all reins and press in all spurs automatically at the very moment we give the command 'charge' then an attack would always succeed, but only then." This expression seems to indicate that the rider rather retards than promotes success at the critical moment, even if involuntarily. Be that as it may, one thing must never be lost sight of, "the obstacle in front *must* be ridden down." This maxim should be the basis of our drilling and leading cavalry; it should become the second nature of all of our cavalry officers and troopers.

We can do nothing against unshaken infantry; nowadays the massed fire of the rapid-fire small arms would in a few moments destroy us; in former times also success against unshaken infantry was the merest exception and only two cases are furnished by military history where cavalry was victorious in that respect—Zorndorf and Féré Champenoise. From this it does not follow, however, that the battle activity of cavalry has been decreased, for now as then defeated, demoralized infantry and infantry without ammunition is a fair prey for cavalry. In the battles of the future there will undoubtedly arrive moments frequently which, if correctly judged and timely utilized, will assure brilliant successes for the cavalry.

At the present day the requirements made on the soldier's nerves are materially increased, which fact we must never lose sight of. This is doubly true in case of the trooper, because two nervous systems come in consideration here; the man can, even if his nerves give out, remain master of the situation through sheer will power, but the case is far different with the horse. To illustrate what a powerful factor will power is, we will repeat a well known anecdote: A young officer when chided during an engagement by a superior officer for

exhibiting fear, for being deadly pale and trembling, replied : "If you were as much afraid as I am you would have long since run away."

We can, of course, not expect any will power in the horse; it has an especial nervous system and every one of us has often lost his temper over the fear displayed by it. What horseman can say from his own experience that he has such control over his horse that it cannot jump sideways if scared at something? Is there a cavalry officer who can truthfully state that his horse cannot turn about against his (the rider's) will? At the very moment of danger, even if but imaginary, fear takes such complete possession of the horse that confidence in its rider is reduced to the minimum and it will do everything in its power to do that which fear inspires it to do. A horse which has once lost its head will be unmanageable for a long time. Once I possessed a well-broken English mare, which, while riding one day leisurely along the high road with a loose rein, gave a sudden start, turned at right angles off the road, up a steep embankment, and ran away as fast as she could. When I finally succeeded in checking her mad career, the beating of her heart was audible and could be plainly *felt*. No reason for her running away seemed then apparent; there was but an ox team on the road ahead of us; but I found out later that the mare was mortally afraid of any horned animal, probably because she had once been injured or gored by one. It took me a long time to break the mare of its fear of horned animals, and even after I had succeeded in that I had always to be on my guard when passing or approaching one of them. It is undoubtedly true that a horse can make a hero or a coward of its rider, according to circumstances.

Were a horse possessed of human intelligence, we could teach it easily that it is far better and less dangerous to go straight at our objective. We could prove it by military history that that body of cavalry which turned tail in front of infantry or chased past it always suffered the largest losses, while it sustained but comparatively small losses when charging with energy into the mass. But as this is impossible, we have but one means left; that is, to instruct the horse by

gradually increasing tasks to overcome its fear and to do all manner of things whereby its nerves will be strengthened; and this is a branch of horse training to which more of our attention ought to be given. Exercises tending to accomplish this must be carefully planned out and executed with intelligence and energy. Much can be done and accomplished in this direction. And it is about time that we would do away with old time-worn usages which but serve to teach the cavalry that which it *shall not* do in war.

The coming to a halt after a charge, which is the common rule in our peace maneuvers, seems to us of doubtful value. That it is entirely wrong we will illustrate by an example: Suppose a body of cavalry, the officers, men and horses of which have never yet taken a ditch or an obstruction, is daily drilled to gallop up to ditches or obstacles, to stop there, face about and retire—as is a common practice. What would be the consequence if some day we would require it to jump that ditch or obstacle? It seems unfortunately difficult to rectify our practice in this matter, as in maneuvers we cannot fire with ball cartridges, neither can we actually charge. We ought therefore plan a means to help us out. One means might be the establishment of a hard and fast rule to sound the “trot” when executing a charge, when the lances would be laid in rest, and immediately after the sounding of “trot” to sound the “deploy” and trot or gallop through lines of skirmishers to the farthest detachment or line in rear and to take up with them the individual combat or *mêlée*. There would not be as much danger of accidents in this as some may suppose; the men ought to be taught and ought to learn to keep their wits about them and their eyes open, and the watchfulness of the officers will do the rest. This will bring in its wake the advantage, which is by no means valued highly enough in our service, of the trooper being taught to keep full control over his horse at all times and to guide it according to his and not the horse’s will. Combine with this always “forward,” never “to the rear,” and in this lies our only salvation.

In time of peace we ought to strive to learn and practice carefully everything which war should teach us, but cannot

because at the present day wars are far too short for that. It may be quite correct to say that four weeks' war experiences are more valuable than four years' peace experiences, but it is also true that war does not create the cavalryman, it merely finishes the well-instructed trooper's education. War will never make a proficient cavalry out of an indifferent mass of poor horsemen and poorly trained horses; there is no branch of the service which requires better schooling than the cavalry. Frederick the Great's cavalry proves this. Frederick the Great said, in his "*Histoire de mon Temps*": "The longer the war continues the better my cavalry becomes and the poorer the infantry." His fine old infantry lay in front of Kolin and Prague; his ranks were depleted, because the prisoners taken by the Austrians were not allowed to be exchanged by his far seeing enemy, the Empress-Queen, and he had to content himself with trash to replace his losses in infantry. That his cavalry became better and better is easy of explanation. Vicissitudes of and hardships in war soon cause all bad or indifferent material and personnel to break down completely; every trooper soon learns that his life depends on the power of his horse and will consequently look better after his mount than after himself; every trooper, if allowed, strives to capture from the enemy a better horse than his own mount, and consequently the material does not deteriorate in war. But no man who knows anything about these matters will believe that mere orders, even if issued by the Great Frederick himself in the midst of the war, where there could be no thought of drill or education, caused such a change with a short year that already at Chotusitz a very respectable cavalry force appeared and that it gained, within four years, at Hohenfriedberg, its world-wide renown if it did not have the germ of excellence and ability in its makeup long before the outbreak of the war. It may be true that in 1740 the cavalry was a very clumsy body, but in any case it was well instructed in horsemanship and had good mounts, else it would never have turned out to be the best cavalry in existence in such short a time. Of course it utilized everything to the best advan

tage and was imbued with the proper cavalry spirit and still stands even now as the highest model of our arm.

The land lies different with us nowadays. To-day everything is carried out hurriedly; we cannot count on completing our education in front of the enemy, and we would do well to strive with might and main during time of peace for proficiency, so that in time of war the very first attack will turn out in our favor.

There is no doubt that every cavalry officer devoutly hopes that the powers may be soon convinced that the cavalry is the very last branch of the service which can do without proper instruction in time of peace—then we might hope that it will receive the same consideration as the other arms. Only a small portion of the sum expended for annual target practice of a single artillery regiment would suffice to enable a regiment of cavalry to acquire useful and proper knowledge for contingencies in war, a requirement we are very deficient in. For the proper instruction of cavalry we need:

1. Annually, after the harvest, each and every cavalry regiment ought to have a three days' maneuver in the country, away from its station. The first day should be utilized in terrain rides in columns of platoons, troops, squadrons, and in double columns; the second and third days' evolutions should be had in the terrain in accordance with a certain fixed problem, this to wind up with an attack and charge against certain designated objects, to be ridden in the same manner as would be the case in actual war.

2. Immediately before the annual fall maneuvers one captain, seven subalterns and a number of the best non-commissioned officers and men (fifteen from each troop), a total of about eight officers and seventy-five troopers per regiment, should be detailed to practice under command of the regimental commander for about one week in a terrain at least forty miles from the garrison, reconnaissance and message service duties, based on a certain problem, to wind up with an endurance ride. These exercises should be directed by the commanding officer in such manner that all participants would undergo actual war conditions day and night,

and would, so to speak, live out all manner of situations which might arise for a cavalryman. A captain would have a grand opportunity in this to practice the not very easy function of being the leader of a modern reconnaissance squadron which, to tell the truth, not many appear to be fitted for without prior schooling. A further object would be to instruct the subalterns in the correct leading of reconnaissance squads and patrols, and this scheme would make specialists for field service out of the non-commissioned officers and troopers—that is, out of those who show their adeptness for and proficiency in such work. It goes without saying that the horses, upon return to the garrison, must be in good condition.

It would be of inestimable value to give the non-commissioned officers an opportunity to gallop across country. In winter time they cannot do so and in summer there seems no time for it. If such exercises could be had, they would be enabled to let out their horses and feel the long stretches the horse takes. As they are to instruct the troopers under them and to teach horsemanship to others, such rides under the direction of the regimental commander or other suitable officer would appear very advantageous and almost indispensable.

The practice obtaining in some regiments to allow a number of non-commissioned officers to follow in a second line behind the officers during a chase, has nothing but disadvantages. General Count Schwerin hits the nail on the head in his saying: "But behind there it is frightful." (*Denn da hinten aber ist's fürchterlich.*)

By carrying out the above suggestions we would take a step forward. Let us never lose sight of the fact: "Only what we practice in time of peace can we take advantage of in time of war."

PACK OR WHEELED MOUNTS FOR CAVALRY  
MACHINE-GUN DETACHMENTS.\*

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By Captain HENRY VICTORIN, TWELFTH REGIMENT OF DRAGOONS, COMMANDANT OF THE CAVALRY MACHINE-GUN DETACHMENT No. 2, IMPERIAL AUSTRO-HUNGARIAN ARMY.

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THE many advantages claimed for the cavalry machine guns with pack mounts are undeniable. But the wheeled-mount detachments also have advantages, and their rejection should be well considered.

Fortified by my experience as commandant of the Cavalry Machine-Gun Detachment No. 2 (four Maxim guns with wheeled equipment), I shall now devote a few moments to a closer observation of the so-called inferiority of the wheeled equipment of such detachments.

First Lieutenant Franz Binder, Imperial Infantry Regiment No. 38, in his pamphlet "The Machine Gun," on page 61, makes the following statement relative to the wheeled detachments: "This too great equipment of 3 officers, 59 men, 73 horses and 6 vehicles (therefore not much less than a six-gun horse battery) is a disadvantage, as it has only a fire effect of one company of infantry at war strength." Opposed to this statement I contend that the strength of the wheeled machine-gun detachments at this time numbers but half the strength of a horse battery. The fire effect of the wheeled detachment is decidedly greater than as stated.

In his article in the July number of this journal (1907) Lieutenant Hayck-Aliprandi, on duty with the Cavalry Machine-Gun Detachment No. 2, has correctly calculated the amount of ammunition that can be carried with a six-gun wheeled detachment to 114,000 cartridges. But even the four-gun detachments have a capacity for 100,000 cartridges without exceeding the draft load per horse (300 kilograms) when the surplus harness and stores, rather too liberally supplied and not urgently required with the fighting detach-

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\*Translated from the *Kavalleristische Monatshefte* for August-September, 1907, by First Lieutenant Frederick J. Herman, Ninth U. S. Cavalry.



ment, is partly carried in the baggage wagon. During the inspection of the Royal and Imperial Army School of Target Practice in Bruck by His Excellency the Royal and Imperial Minister of War on July 2, 1907, the cavalry machine-gun detachments came into the following battle situations:

My own detachment at the Leitha bridge in action with opponent on Hospital Hill, which according to report from the cavalry had its right wing at the end of the new camp, was strongly threatened by contemplated advance of opponent. The cavalry machine-gun detachments, Captain Emil Mierka v. Mowa-Lieszko, with pack outfits, and my own with wheeled mounts, available at this moment, with one squadron (the squadron of instruction, Rittmeister Herman Bordolo v. Boreo), were sent to the threatened point, the rose fields, at the most rapid gait, with orders to oppose the advance of the enemy by all means until the arrival of our own infantry, or for some fifteen minutes.

The detachments named disposed for action by Captain Leonhard Rebhahn, of the Royal and Imperial Army School of Target Practice, solved the problem completely in that so many hits were made in the various targets (consisting of folding targets marking the alternate advance of the opposing detachments, and also a rather loose skirmish line in shelter trenches, one-third of all of which were hit) that in actual warfare the opposing force would have been absolutely compelled to retreat. The Cavalry Machine-Gun Detachment No. 2, wheeled mount, inside of fourteen minutes hit thirty per cent of the figures in its segment of fire, during which time both detachments advanced simultaneously for 800 paces at a gallop from the first position and went into action against folding targets suddenly appearing during their advance, and on which the wheeled detachment was able to open fire several seconds earlier than the detachment with pack mounts, owing to its ability to fire from its carriage.

In view of this concrete example, and considering its great capacity for the transportation of cartridges, I believe that the battle effect of a wheeled machine-gun detachment of four



guns may be taken as greater than that of one company of infantry.

First Lieutenant Binder further says: "Besides this, the carriages betray the character of the detachment from a distance and offer, on account of their size, a favorable target, and can therefore be easily put out of action."

In order to mask the carriages I have changed the heretofore normal formation so that the four men, instead of riding in single rank in rear of the carriages, now ride one pace outside of the wheels, each member at a specified place.

Wherever cavalry can march in fours the detachment so grouped can also march, as they require the same width of road. Where cavalry must march in twos on narrow roads, the detachment can also assume such formation, the cannoners in twos in rear of the piece, but the column will, of course, be lengthened by so doing. Experiments have proven that by this means it is hardly possible to recognize these gun carriages, painted in olive color, and so covered by the detachments of cannoners at a distance of 500 paces. The enemy gains the impression of a cavalry detachment marching in fours, as the draft horses are flanked on either side by non-commissioned officers so disposed for this purpose. The unlimbering of the piece and the subsequent removal of the teams and limbers out of the line of fire can thus be accomplished more rapidly than by the former method.

During the battle exercises heretofore mentioned the wheeled detachment, moving forward at a gallop with its men on both sides of the piece, required but twenty seconds from the command, "Action, front!" to the beginning of its fire, as was recorded by the supervising officers of the army school for target practice, where it was required to deliver aimed fire at 600 meters against folding targets visible for but one-half minute.

The gun detachment when riding behind the piece was often exposed to accidents whenever the galloping pace of the teams was suddenly changed by reason of encountering obstacles, and last year a horse of the gun detachment was badly injured in the chest in this manner by colliding with the piece. With the formation of the cannoners on both

sides of the piece the detachment commander may safely increase the gallop to the maximum speed of the teams, as he is no longer concerned about the former precarious circumstances of his cannoneers, who now have a clear run before them. This became apparent during the battle exercises where the wheeled detachments went forward at a more extended gallop than the pack-mount detachment.

A piece with its limber and with the detachment formed on both sides presents a target surface to an opponent six paces wide and twelve paces deep, or seventy-two square paces. A machine gun packed, with its accessories of ammunition, horses or mules, etc., cannot conceal itself in open terrain. It presents a target surface six paces wide and fifteen deep, or ninety square paces. The assertion that the wheeled detachment offers too large a target, therefore, no longer holds good, and, besides, the marching column of the wheeled detachment of four guns and two caissons occupies but a length of eighty two paces against ninety two paces for that of the pack-mount detachment with twelve ammunition pack animals. Thus have the figures been changed in favor of the wheeled mounts. In the same manner the length of column of a six-gun wheeled detachment mentioned in Lieutenant Hayek-Aliprandi's article, has been reduced from 182 paces to 124 paces, and this with the detachment in single rank behind the piece and limber according to the former regulations, which prescribed double rank only the year before.

Where, in action, the pack-mount detachments, in order to escape the too early attention of an opponent, pass over terrain offering no cover in groups with intervals, gun detachments moving at the most rapid gaits, the wheeled detachments, as practically demonstrated by me personally, are as fully capable of doing likewise. Every such gun, so masked, with wheeled mount, is of course manned by a full complement of non-commissioned officers and men, is a small battle unit, and offers, as heretofore stated, a smaller target area than a similar gun and detachment with pack mount. The limbers and teams of the wheeled detachments are very mobile, and are rapidly taken to the nearest cover

by the non-commissioned officer in charge, as soon as the pieces are unlimbered in battle exercises, when it is not possible to open fire at once from a position under cover, so that the complaint of the "great target" constantly offered against the wheeled mount is not justified.

In comparison with this the entire equipment, with horses, of a machine-gun detachment with pack outfits, when under fire, has but little mobility on account of its many led horses, and is almost to be compared to the led horses of the cavalry in dismounting to fight on foot.\*

The doubt expressed by First Lieutenant Binder of the possibility of bringing off the gun upon the loss of a portion of the team was met in Pamphlet No. 7.

I wish to add that with the ingeniously contrived harness it requires but a few motions, and the withdrawal of a few bolts to separate the dead horse from the carriage and to drive on with the remainder of the team, which is regularly practiced by the detachment upon the brief statement, "Near wheel horse dead," "Off led horse dead," etc. The chief of section concerned, with his gun detachment, promptly and rapidly attends to such matters without command, makes the required change and follows the detachment at a gallop.

The assertion of Lieutenant Binder, "Finally the cavalry must forego the coöperation of the machine guns as soon as the latter comes into rough or difficult terrain, because its vehicles are unable to follow," has been fully refuted by Lieutenant Hayck Aliprandi in his resumé, in which he states that during the imperial maneuvers in Silesia last year, wherever the cavalry division was able to come through he was able to follow, and bring his detachment to every designated position always at the right time, notwithstanding

\*TRANSLATOR'S NOTE:—This is a question of formation. In the cavalry machine-gun service of the United States Army, the cannoneers, drivers and pack mules now form a column of threes (except in route marches). As soon as the piece and tripod and the ammunition boxes are down, the led animals are moved off by the drivers (a led horse on one side and a pack mule on the other) under the command of the senior non-commissioned officer, and move with much greater facility and rapidity than the led horses of an American cavalry troop dismounted to fight on foot—in fact, are nearly as mobile as the teams of the field artillery.

that the terrain near Teschen and other places was rather difficult.\*

The above assertion applies mostly to the singular ground or surface covering of upper Italy. Eye witnesses of battles in upper Italy state, however, that by reason of the many walled and terraced vineyards and the wired mulberry trees, etc., the cavalry could not maneuver very much except upon the roads and that attacks were even delivered along the roads. Here the machine-gun detachments would be able to follow the cavalry, and, because of the many road defiles, would often find opportunity for the delivery of massed fire as a surprise.

In order to enable the detachment to cross ditches with vertical walls and more or less width and narrow bottoms, I have constructed a portable bridge, which is carried folded upon a limber and which can quickly be thrown across the ditch. The detachment drives over, and the last vehicle takes up the bridge again. Each platoon has a portable bridge  $1\frac{3}{4}$  m. long. In an emergency bridge-parts may be quickly joined to form a bridge of  $3\frac{1}{2}$  m.

In the matter of the employment of the cavalry machine-gun detachments in the attack I wish to mention one more instance besides the advantages heretofore credited to the wheeled detachment by Lieutenant Hayck - Aliprandi. Should a hostile attacking cavalry detachment, riding at its fastest gate through the zone of fire, nevertheless reach the unlimbered machine guns, the charging riders will hardly succeed in disabling any of the gun detachments with saber

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\*From the reports of the operations of the Third and Seventh Cavalry Divisions appearing in the October (1906) number of this journal, it appears that the two cavalry machine-gun detachments attached thereto (one with four Maxims, the other with four Skoda guns) with wheeled mounts, proved to be very efficient.

The maneuver ground is heavily covered with vegetation, with few view points, quite hilly, with deep ravines and frequent swampy brooks and valleys which were thickly covered with young trees and brush; the terrain favored the operations of large bodies of cavalry very little. But notwithstanding this, the two wheeled machine-gun detachments came through everywhere, and always on time. I believe that this was a most thorough test of their mobility. The gun carriages were decidedly not unwieldy and were able, in fact, to drive across fields. (See First Lieutenant Binder, page 20.)

or lance, as the latter, at the last moment, will take shelter behind the gun carriages, which will serve like an armored tower, and from there use their magazine pistols. (Historical examples are numerous. Batteries apparently taken by cavalry, resume their fire after the charge has passed and, in part also, the charge of Bredow's brigade.)

A machine-gun detachment with tripod mounts, in action and lying on the ground, would in all probability be ridden down and destroyed under such circumstances.

In the determination of the question of pack or wheeled mounts, the unavoidable saddle galls mentioned by Lieutenant Hayck-Aliprandi in the detachment with pack mounts are of considerable importance. Relief within the fighting detachment is hardly possible, as all horses carry either a rider or a pack with machine-gun material.

Those who participated with the Austrian cavalry in the campaign of 1866 can tell of the many saddle galls of that time, and the well-trained personnel with long service and much routine work must be considered in connection therewith. So also the dead weight, the many bivouacs in the rain, which will ruin the most carefully constructed pack-saddle.

With the wheeled detachment relief is very simple; a galled saddle horse is harnessed in as off horse in a team, where the back, relieved of all burdens, will soon heal, while the former draft horse carries only a rider. A horse with collar galls is unhitched, serves as a saddle horse, and in a short time, with care, becomes again available as a draft horse.

The heavily packed led horses of the pack-mount detachments may often stumble and fall during the strenuous work at fast gaits with rigid leads, as they would miss the supporting hands of the riders—which the lead reins never fully replace—thereby presenting the liability of damage to the material, not excluding broken legs.

I believe that I have touched upon only a few points that are in favor of the wheeled detachment.

A desirable detachment of this kind would be, according to my practical experience, as follows: Fighting detach-

ment—six guns, three caissons, Schwarzlose system, with a light gun sledge (the present one is too heavy), with a handy oscillating and elevating gear for precise distribution of fire in horizontal, vertical and oblique directions—the present gear is too clumsy; with the piece, five men, including the gunner and drivers; other non-commissioned officers to correspond to present organization; light cavalry saber fastened to saddle; magazine pistol, except for drivers. Carriages, equipment, etc., in the color of the terrain—green-brown shade.

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THE CHARGE OF GENERAL FRENCH'S DIVISION  
AT THE MODDER RIVER, FEB. 15, 1900.\*

THE new Commander-in-Chief of the British forces, Lord Roberts, arrived at Cape Town on January 10, 1900. He found conditions very unfavorable. The British forces held a line of nearly 400 kilometers in extent, in four separated groups. The main forces were still in Natal at Frere and on the Modder River. Up to now it had been impossible to relieve Ladysmith and Kimberley. In the center the two weak detachments under Generals French and Gatacre held their positions at Rendsburg and Sterktroom only with the greatest difficulty against the Boer commandos, which had taken possession of the northern part of Cape Colony.

The new Commander-in-Chief considered it his first task to remove the main difficulties and to inaugurate a better system, based on the experiences so far gained. The lack of cavalry had made itself especially felt, as only with mounted troops could the swiftly-moving mounted Boers be effectually followed up and engaged. Consequently Lord Roberts decided to create a large body of cavalry by concentrating all available cavalry (now attached to the different divisions) and mounted infantry. Of the latter there were eight companies, one battalion mounted engineers, four battalions colonial mounted infantry, and two sanitary compa-

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\*Translated from "*Kavalleristische Monatshefte*," January, 1909, by Sergeant Harry Bell, Corps of Engineers.

nies. All division commanders were directed to detach their cavalry. Besides that already organized, additional mounted infantry was formed by selecting the best men from the different battalions and organizing them into mounted infantry regiments. These troops were organized into one cavalry division of three brigades, twenty-four squadrons, and seven horse batteries. The total strength of this new division was 3,600 sabers, 1,400 rifles, 42 guns, 14 machine guns. The forty-seven years old Colonel French was selected to command the division; he had all the necessary attributes of a dashing cavalry leader. In England he had been in command of a cavalry brigade; he was one of the first in South Africa on the eastern theater of war, where he had been successful in leaving Ladysmith on the last train before the investment; had then participated, as commander of the third detachment, in several severe battles in the central theater of war at Rendsburg, and received now the command of the new division with the brevet rank of lieutenant general.

General Roberts' plan was to carry the war into the enemy's country, for that only promised a betterment of the military situation. His objective was Bloemfontein, the capital of the Orange Free State. With that once in his possession the Boers would be compelled to abandon the investment of Kimberley and Ladysmith to defend their own homes. Of the roads leading to Bloemfontein Lord Roberts chose the most westerly one. The entire force was concentrated, the beginning of February, on the railroad between the Modder River and the Oranje River, the cavalry division in the Modder River camp. General French received orders to immediately relieve Kimberley.

By the 15th of February French's division stood immediately south of the Modder River, having marched in a northerly direction without having encountered much resistance. Early on the 15th French started with his division with intentions to reach Kimberley before night. But during the night the Boers had obstructed his line of march. With 900 men and three Krupp guns they had occupied the kopjes north of the Klip Drift in a semicircle of about four

kilometers extension. About the center of the position was a 1,200 meters long saddle, connecting the two kopjes. This saddle sloped gently toward the river and could be taken under effective cross-fire from the two kopjes. The Boers had entrenched themselves on the two kopjes; their guns were placed on the westerly one.

Some patrols sent out by French had succeeded in reconnoitering this position. General French ordered his entire batteries and the two 12-pounder heavy naval guns, which had reached Klip Drift the evening before, to go into position and fire on the Boer position. He intended to charge through the Boer line across the saddle, supported by the superior fire of his artillery. It was shortly after 9 o'clock. General French called the brigade commanders, told them his intentions, and issued his orders. The Third Brigade (Gordon) to charge as first line in open order, five to six paces between troopers, across the saddle through the hostile position in a northerly direction; the Second Brigade (Broadwood) to follow at 500 yards distance, in second line; the First Brigade (Porter), with the mounted infantry and the horse batteries, which were directed to fire until the last minute, to follow as the third line.

The two leading brigades deployed at once and advanced on the gallop to the charge. Heavy clouds of dust soon made them invisible. French rode at the head of the Second Brigade.

After the dust had subsided the two brigades were seen about 1,500 meters beyond the hostile position and were reforming. All the Boers who had not fled were taken prisoner, the position was taken, the road to Kimberley opened. The success proved what theory would have considered impracticable.

The following account of an officer participating in that charge gives a graphic view of it: "The undertaking seemed to us in the start foolhardy; we believed that but few of us would live to tell the tale. If we had executed such a charge on the maneuver ground at Aldershot we would have been ruled out of battle and every one would have considered us stupid, to say the least. After we had covered about 400 meters



on a gallop we received a heavy frontal and flank fire and I looked along the ranks expecting to see the men fall by scores, but although the rifle fire was heavy and rapid I did not see a single man fall."

The casualties of the division were sixteen dead and wounded and thirty horses.

After a rest of about an hour the division resumed its march towards Kimberley. Critical examination of the means employed leads to the question: What are the peculiar effects or results of those means and were these results what the leader expected?

French attacks. Supported by the artillery, the attack succeeds. French knows their strength and is informed by his patrols of their position. The artillery fires on both kopjes with good effect. The immense cavalry force is true to its moral influence and the enemy abandons the position or is taken prisoner.

"Everything in war is very simple, but the simplest thing is difficult."

The success should primarily be credited to the cavalry leader, to his intrepidity. We consider French an ideal cavalry leader. He grasps the situation in a second, forms his plan, and carries it out energetically. Every success in war hinges on two factors: Our own decision and consequent action, and the conduct of the enemy, *i. e.*, his worth. The Boers were not regular troops seeking a decisive battle; they desired to hold back the English but were intimidated by the latter's energetic advance; there was no supreme commander; they fled.

French's intrepid charge will prove to every cavalryman that energetic action is the surest means to gain laurels.

F. W.

## THE MILITARY HORSE SUPPLY IN GERMANY.\*

From *The Broad Arrow* of November 7, 1908.

THE effective strength of the horses required for military purposes in Germany during peace is about 110,000. Every year at the conclusion of the maneuvers the horses which are of no further use are cast, and their places filled by the issue of remounts, of which the army requires annually from 13,000 to 14,000. The average length of time which the cavalry horse is expected to serve is about ten years, while in the artillery, where the animals are subjected to greater strain, they serve for not more than nine. Germany is so fortunate as to be in the position of being able herself to supply the whole of her requirements in horses for the army. During the spring and summer the horse-breeding provinces are visited by five different remount commissions, which buy up all three-year-olds, and occasionally even four-year-olds, suitable for military purposes. These raw and unbroken animals are then driven into the remount depots, and are there prepared for the hard military life that is before them by means of special diet and forage. Altogether there are twenty-five of these depots, there being one in Wurtemberg, two in Saxony, four in Bavaria, while all the remainder are in Prussia; the provinces productive of the majority of the remounts are East and West Prussia, Hanover, Posen, the Rhine province and Saxony. From the four first provinces are chiefly drawn the remounts for the cavalry and field artillery; the two last produce mainly the heavier draught horses suitable for heavy guns, and these are not sent in to the depots for treatment, but are issued directly to the heavy batteries. Best of all the provinces is East Prussia, in regard both to the quality and numbers of the remounts there produced, for the Germans claim that the animal from East Prussia is the true type of a charger. The great majority of the cavalry remounts, and very many, too, of those for the field artillery, come from

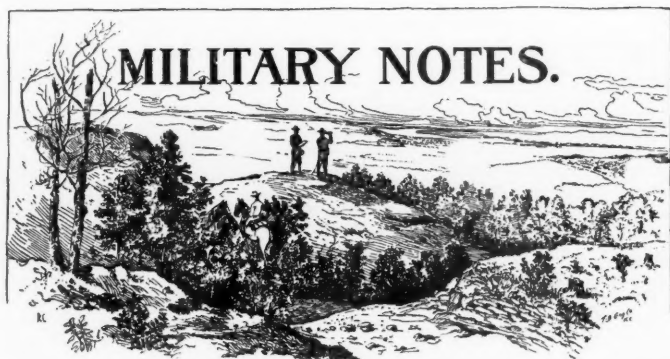
\*Translated from the *Neue Militarische Blätter*.

East Prussia or from the horse-breeding districts of West Prussia, whose produce is very nearly equal to that of East Prussia. Posen breeds a good class of light-weight charger, while the horses from Hanover are generally handed over to the heavy cavalry or field artillery.

The remount commissions are responsible for the due distribution of these horses to the parties sent from units to take them over, and the actual issue of four-years old only is then made during the summer from the remount depots. All remounts suitable for officer's chargers are first put on one side, and the remainder are then divided into riding horses, first and second-class, and draught horses, first and second-class. In the case of remounts for certain regiments the color has to be taken into consideration. The First Hussars of the Guard for instance, only take greys; the Fourth Hussars, according to ancient usage, must have a certain proportion of piebald horses. For some time past greys have not been generally accepted as remounts, the color not being now considered suitable for the exigencies of field service. In regiments an attempt is usually made to have horses of the same color by squadrons, while batteries are generally horsed upon animals of the same color. Trumpeters are always mounted upon horses of the same color, while in regiments of field artillery the batteries are usually horsed with chestnuts or black horses. The portion of the First Field Artillery Regiment quartered in the very midst of the horse-producing districts of East Prussia is considered the best mounted of the artillery of the whole army, and is mounted throughout upon black horses. It is said that the old Kaiser William, after attending a parade of these particular batteries, remarked to the commanding officer, "Your horses look so well that I would dearly like to take a pair away with me for my own stables."

During the absence of the troops at the autumn maneuvers the riding establishment, which remains behind in quarters, commences the breaking in of the young horses to saddle, bit and rider, but the actual training only really begins on the return of the troops from the maneuvers. The horses are taken the greatest possible care of, and in

particular with regard to the remount from East Prussia, which is only placed in the ranks as a six-year-old, the utmost care in the training is insisted upon. The training at the remount lasts from the beginning of the winter of one year until the end of the winter of the following year, and at the end of that time the remount, now a six-year-old, is issued for duty to squadrons and batteries. In the autumn those horses which are no longer considered fit for the service are cast and are then sold at open auction, and many a small farmer obtains at a cheap price an animal which suits his purpose admirably. Of late years many horses which are no longer considered fit for cavalry and field artillery are handed over to the mounted detachments of the foot artillery or to the transport.



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### THE CAVALRY SADDLE.

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BY CAPTAIN ALONZO GRAY, Fourteenth Cavalry.

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IN the October number I presented a sketch showing my idea of what a cavalry saddle should be.

At that time I applied to the War Department to have one of these saddles made at the arsenal. The Ordnance Department declined to make it, but offered to do so at my expense for \$47.50.

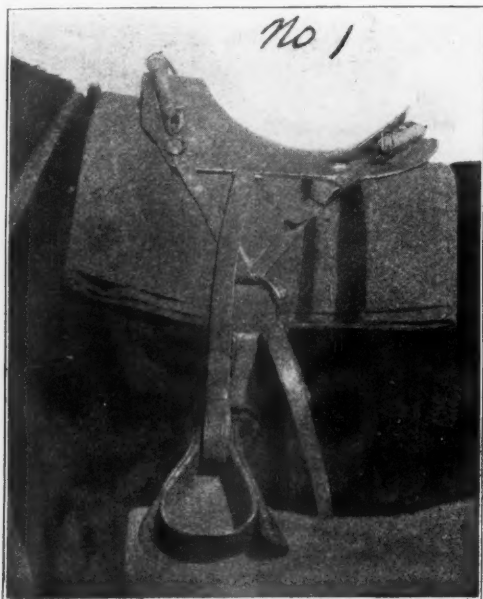
Through a friend I was able to get a saddle-tree company to take up the work, and then I first received a wood tree, which I altered as I thought proper. The next one received was covered with raw hide, and is the one shown in photograph No. 1. It was this tree that Captain A. L. Dade, Thirteenth Cavalry, experimented with. His report is herewith enclosed. The same saddle is shown packed in No. 2. Nos. 3, 4 and 5 show comparative views of this saddle with the McClellan, of side view, pommel arch and bearing surface respectively.

After Captain Dade had made his experiments I had another tree made slightly modifying the first one. This is shown in No. 6.

I had this tree covered with leather and, without cinch and stirrups, it cost an even \$10.00. I am, therefore, \$37.50 ahead of the game.

I am indebted to Sergeant King of the Signal Corps for the photographs.

The last model is now before the Cavalry Board for further test and report.



CAPTAIN DADE'S REPORT.

FORT LEAVENWORTH, KAS., February 1, 1909.

MY DEAR GRAY:—With reference to the tests you were kind enough to permit me to make of your experimental cavalry saddle, and the conclusions I have reached therefrom, it gives me pleasure to state that the former were highly satisfactory and the latter entirely favorable.

I will briefly summarize both, in order that you may have them at your disposal for such use as you may see fit to make of them.

My illness during the time I had the saddle prevented me from making my personal test as extensive as I would have liked it to be. However, I used it enough to satisfy me that the seat is the easiest as well as the most comfortable and natural I have ever ridden. I have used saddles having similar seats but none quite as comfortable as this.

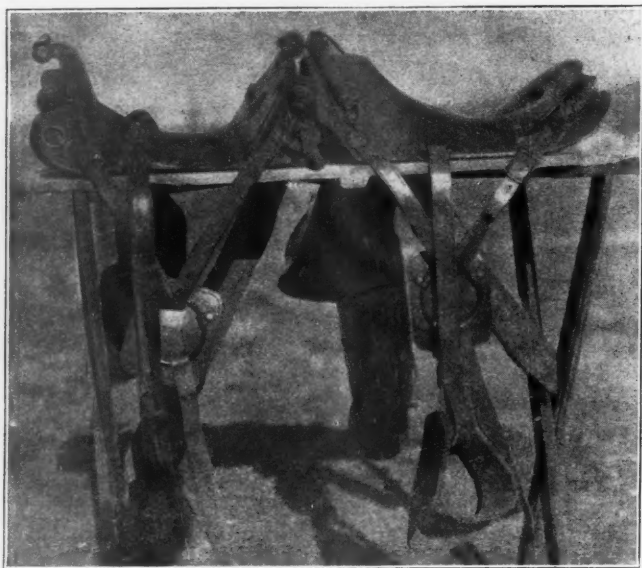


As for that part of the saddle which is in contact with the rider I can suggest no improvement. It fits, and that is the first requirement. The other requirements, that the rider should be able to adapt himself easily to the movements of the horse while maintaining the balance and contact securely and without conscious effort, it also fulfils. The shape of the seat and the position of the stirrups make it easy, if not

imperative, to take and maintain that seat which is admittedly the best for the trooper.

That it can be packed as readily, securely and conveniently as the saddle now issued, your own experiments and the tests of my non-commissioned officers, presently to be taken up, show conclusively.

That part of the saddle which is in contact with the horse, the underbearing surface, is manifestly a vast im-



No. 3.

provement over the corresponding feature of either of the saddles at present in use in the service.

The conviction has long been growing upon me that the amount of time, care and worry that a troop commander is obliged to bestow upon the prevention and care of sore backs, especially what are sometimes called kidney sores, from their location, or cantle sores, is, to say the least, excessive; and at the same time there has also grown the conviction that the short bars in the rear and the narrow pommel arch in

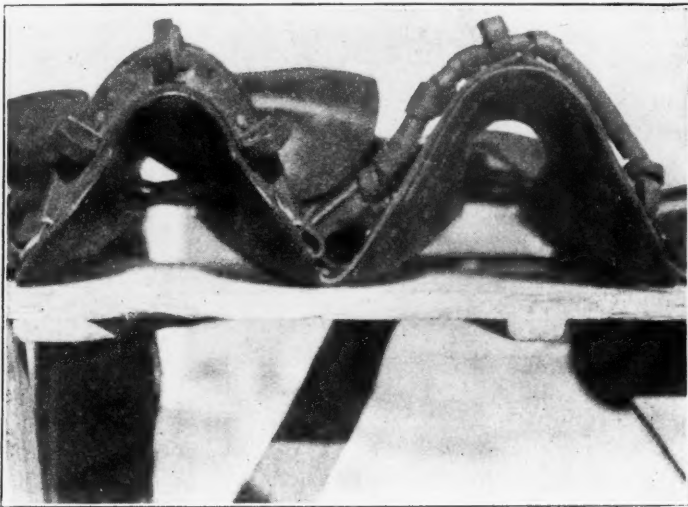


front of the present saddle are in large measure responsible for this state of affairs.

I believe your saddle, with its improvements of the two features mentioned, will go a great way towards remedying these troubles, if it does not eliminate them entirely.

As for shifting of saddle, slipping of saddle blanket, etc., the reports of my non-commissioned officers, which I will now take up, dispose of them satisfactorily:

First Sergeant Emil F. Gregor of my troop ("K," Thirteenth Cavalry) made a ride of fifteen miles, approximately,



No. 4.

in two hours and forty five minutes. The weather was cool, the roads good, the country quite rolling (eastern Kansas). He rode at the three gaits, principally at the walk and trot, according to the character of the road.

He notes:

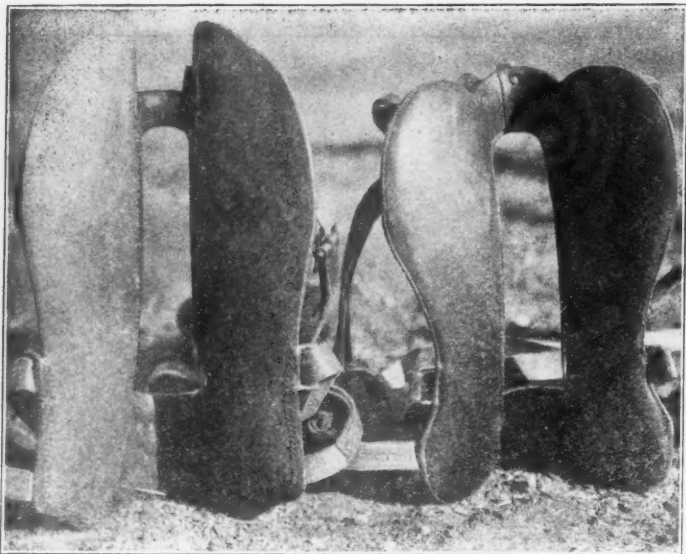
First. That there was no slipping of the blanket, though his horse has low withers and he usually has this trouble with his blanket on the march.

Second. The seat is superior to the McClellan, in that it is

long and permits the man "to sit erect without being thrown forward with every movement of the horse." Sergeant Gregor is rather short and quite stout, so I conceive this feature to have appealed strongly to him.

Third. The stirrups must be shorter with this saddle than with the McClellan, which also gives a more natural seat.

Fourth. The adjustable quarter-strap is a good feature, as the girth can be shifted forward or back and also short-



No. 5.

ened or lengthened according to the desired position of the saddle on the horse's back or the size of the animal. His horse was "soft," having had nothing but garrison work for over two months.

Sergeant George J. O'Mara, of the same troop, rode approximately thirty-four miles with full pack on December 23, 1908. The horse was rather low in flesh with high withers. The roads were good and the weather cool, the country eastern Kansas, the gaits walk, trot and some gallop. After

going eight miles he dismounted, loosened the cincha and examined the horse's withers. Finding that the saddle was riding properly and doing no harm, he re-cinched the saddle and did not again disturb it during the day. He considers the seat excellent, for the same reasons as advanced by First Sergeant Gregor. (Sergeant O'Mara is below the average height and by no means stout). He considers the saddle in every way superior to the McClellan. The blanket did not slip, the pack rode well and the projecting bars behind the cantle prevented the roll from pressing upon or chafing the horse's backbone.



No. 6.

Corporal Daniel Daly rode eighteen miles in three hours over the same character of country, under the same weather conditions and at the same gaits as the others. He carried full pack. He considers the saddle "easy riding," "well balanced" and altogether a vast improvement over the present saddle.

Corporal Walter A. Adams made a ride of about twenty-five miles in approximately four and a half hours with a full

pack, over the same roads, under the same weather conditions and at the same gaits as the others. After about three miles he found that the saddle had moved forward slightly (he had started with it loosely cinched). After readjusting it he rode to Lowemont, about eight miles, without change in the position of the saddle or blanket or need of readjusting either. At Lowemont he unsaddled for a critical examination of the horse's back. Finding everything satisfactory he returned to the post. To test the saddle more fully, he trotted down steep grades that would ordinarily be taken at the walk. His horse, like the others, was comparatively "soft."

The pack was a little larger than the average, as it was made of heavy winter garments. He found it to "ride" well, resting on the extended bars in the rear. He considers the seat very comfortable and regards the fact that it places the rider over the center of the horse's back especially commendable.

None of the horses ridden by these men showed any sign of bruise or abrasion. They were selected with the view of testing the saddle on horses of normal conformation and on those possessing peculiarities common in cavalry mounts. These non-commissioned officers are men of experience as well as intelligence and their opinions are entitled to no little weight.

I would very much like the opportunity to extend these tests by using several saddles of your model on a protracted march, with full belief that its superiority in all respects would be unquestionably established.

Most sincerely yours,

A. L. DADE

## COMPANY RECORD CASE FOR FIELD SERVICE.

IT is now recognized that our most serious problem in future wars will be that of transportation. We will have to reduce our impedimenta in the field and be able to cut loose from all wheeled transportation for months at a time, if necessary.

The present company field desk, I think every one will agree with me, is a nuisance. It is an inconvenient, clumsy



COMPANY RECORD CASE FOR FIELD SERVICE.

affair, which has to be carried in a wagon or on the back of a pack mule. It is never at hand when wanted, and has been in many cases a serious drawback to organizations in the loss of all their records. As a field record case it is out of date and should never be used again.

The company record case for field service, devised by me and illustrated herewith, is designed to meet the requirements of something to take the place of the present field

desk—something that it will not be necessary to haul around in a wagon or even pack on the back of a mule—a light serviceable case made of water-proof material, which will provide a dry place for all the records necessary to supply an organization in the field for three or four months—or longer, if necessary.

The case is made of fair, pebble-grained leather and weighs with the shoulder sling attached  $2\frac{3}{4}$  pounds. It



COMPANY RECORD CASE FOR FIELD SERVICE.

contains several separate compartments made to fit the different articles and forms. It is also provided with a large piece of oiled silk in which the permanent records may be wrapped in case it becomes necessary to swim a stream. It may be worn on the person in several different ways, with the shoulder sling, attached to the field belt, or worn as a knapsack over the infantry pack. It may be attached to any part of the saddle or pack.

Packed for a company of infantry of sixty-five men, with all the records necessary for three months field service, it will weigh less than eight pounds.

For a troop of cavalry of the same strength it will weigh something more on account of the descriptive lists of public animals which should be carried.

The following records will be carried by a troop of cavalry for three months field service:

One company council book, or a small memorandum book from which the entries may be transferred later; one correspondence book; three duty rosters; descriptive lists of all men; descriptive lists of all public animals; three special field returns; six inventories of effects of deceased soldiers; ten monthly returns; three muster rolls, to include the last retained roll; three morning reports; four pay rolls, to include the last retained roll; one book of ration returns; two sick reports; statement of services; three returns of casualties in action; twenty summary court forms; sufficient discharges and final statements required for men to be discharged during expected time of absence in the field; necessary enlistment papers, tri-monthly reports, physical examination blanks, etc., for men to be discharged and reënlisted; ink, in bottle provided in the case; pens, pencils and erasers, in pockets provided for them, and such stationery as may be required and can be conveniently carried.

When the period of field service is expected to embrace the time required for rendering the semi-annual ordnance return, the retained copy and such papers and blank forms as may be necessary would be taken along.

SHERRARD COLEMAN,

*First Lieutenant, Ninth U. S. Cavalry.*

THE RELATIVE COST OF CAVALRY AND  
INFANTRY.

ON page 61, "Organization and Tactics," by Wagner, a work which is used as a text book by the War Department, occurs the following sentence under the head "Powers and Limitations of Cavalry:" "Its disadvantages are that it is an expensive arm to equip and maintain, *costing, as it does, three times as much as the same number of infantry.*"

This is the stock argument of many in opposing cavalry increase.

It was also an argument advanced some years ago by others when it was wished to increase the coast artillery arm at the expense of the cavalry corps.

It is heard often in the halls of Congress, uttered by our eloquent representatives, in proposing the reduction of the army.

It is, by our pedagogues, impressed on our second lieutenants as the correct answer to the question, "State the limitations of cavalry."

It is made the text of profound treatises on the art of war written in our text books and service journals.

Wagner says, "Cavalry costs three times as much as the same number of infantry."

\* \* \* \* \*

In the face of all this I propose to demonstrate that far from costing three times as much as the same number of infantry, *the additional cost of cavalry is an insignificant increase of about one-third.*

In order to ascertain the comparative cost of infantry and cavalry, let us first compare the relative cost to the Government of the infantry soldier and the cavalry soldier, taking the case of a private of each arm in his first enlistment.

In each case the pay is \$15.00 per month and the average clothing allowance is \$57.51 per year. In each case the same ration is eaten; average value in last fiscal year reported as 18.66 cents per day. Each has the same shelter, light, heat



and water service, which is estimated as costing \$46.15 per year, fixing the average value of company barracks at \$30,000 and allowing ten per cent. for impairment, light, heat and water.

Each has the same medical attendance, estimated as being worth \$18.00 per year.

I also take into consideration (charging the excess to the cavalry) the value of the yearly allowance of ammunition, in which the cavalry soldier exceeds the infantryman; the value of the arms carried by each, placing the average life at five years; the value of the soldier's equipment which for the infantryman and for the dismounted cavalryman is about the same, and of which I estimate the life at three years.

Taking the additional cost of the cavalryman into consideration, we have the following items:

The contract price of the horse last year was \$136.00. I fix his average price at \$140.00 and his average length of service seven years. A horse's forage is reported last year as costing 26.33 cents per animal per day or \$96.09 per year. His shelter I estimate at \$9.69, by allowing ten per cent. annual impairment of a stable costing \$6,500.00, which seems to be about the average cost of a stable. His medical attendance is estimated at \$5.00 per year. The cost to the United States of forty-eight shoes per year and the corresponding nails, being four shoes per month, is \$2.22.

In estimating the life of the saddle of the cavalryman I put it at five years, of other saddle and horse equipments three years.

It will be seen that many of these items are approximations. They are necessarily so. And yet I believe they will afford a fair estimate, within limits, of the annual cost of the infantry soldier and of the cavalry soldier, and a fair approximation of the fraction indicating the additional cost of the cavalry soldier.

Table A—COST—INFANTRYMAN OR DISMOUNTED CAVALRYMAN.

Pay of private per year, first enlistment .....	\$180 00
Rations, 18.66 cents per day, 365 days .....	68 10
Clothing, average per year, first enlistment .....	57 51
Ammunition, value per year, cavalry (\$17 25) .....	
Ammunition, value per year, infantry .....	14 25
Shelter, light, heat and water service, ten per cent. cost on \$30,000.00 (average cost of barracks) divided by 65 .....	46 15
Medical attendance, \$18.00 per year .....	18 00
Arms, infantry, value \$17.50, cavalry, \$31.70, (average life five years) yearly cost of infantry arms .....	3 50
Equipment, infantry soldier, \$12.66 (average life three years) yearly cost (about same for cavalryman) .....	4 22
	<hr/> \$391 73

Table B—EXTRA COST OF MOUNTED CAVALRYMAN.

First cost of horse \$140.00, average cost per year (life of horse in service seven years) .....	20 00
Forage of horse, 26.33 cents per day, per year .....	96 09
Shelter, light, water service, etc., of horse, ten per cent. cost on \$6,300.00 (average cost of stable) divided by 65 .....	9 69
Medical attendance of horse, \$5.00 per year .....	5 00
Shoeing of horse, four shoes and nails, \$0.18½ per month, per year .....	2 22
Extra cost of ammunition for cavalryman .....	3 00
Extra cost of arms, cavalryman, \$14.20 (life five years), yearly extra cost .....	2 84
Cost of saddle and saddle-bags of cavalryman, \$28.00 (life five years), per year .....	5 60
Cost of other saddle and horse equipments, \$27.42 (life three years), per year .....	9 14
	<hr/> \$153 48

It will be inferred by the above figures that in his first three years of service the annual cost of an infantry private soldier is about \$391.73 and that the annual cost of the cavalry private soldier is about \$545.21, and that the additional cost of the cavalry soldier is about \$153.48, or thirty-nine per cent.

But, it may be objected, this estimate is very far from indicating the comparative cost of a *company* or *regiment* of cavalry or infantry.

That is true, and if we look more closely into the matter we will find, I think, that this percentage indicating the additional cost of cavalry must be decreased, not increased.

Take the company, for instance, and compare it with the troop of cavalry.

Table "B" remains the same, representing the average extra cost of the cavalryman with his horse. But Table "A," representing the average cost of the infantryman or dismounted cavalryman, must be radically changed.

Item one. Taking a company of infantry, or a troop of cavalry, the average pay, including officers, non-commissioned officers and privates, and including increased pay for length of service, is over \$300.00 per year for each individual member of the company or troop, including enlisted man and officer.

Items 5, 6 and 7. The ammunition, shelter, light, heat, water service and medical attendance of the three officers of a company or troop costs the Government from \$1,500.00 to \$2,500 00 per year.

Disregarding these last items and taking only the first, that of pay, and substituting \$300.00 for \$180.00, we have, first table, total cost of dismounted man \$511.73. Second table, total additional cost of the cavalryman \$153.48. Additional cost of cavalry thirty per cent.

"But," vaguely reply our critics, "in time of war cavalry costs more."

Yes, that is true, too. Horses cost more, and so does forage, and horses die and equipments are destroyed. But the forage and clothing of infantry also increase in cost, and so does recruiting. Nevertheless, I think it can be demonstrated that in order to cost three times as much as infantry in war it would be necessary for the average cavalryman to kill off at least eight horses per year.

It is, of course, in war or peace, very difficult to estimate, accurately, the comparative cost of cavalry and infantry. But when one realizes that the annual appropriation for subsistence of the army is per man over \$100.00, and that regular supplies and transportation of the army together figure up to about \$300.00 per man, it should not be difficult to see that to put an infantryman on a horse does not increase his cost three times, however much it may his value.

It is difficult to understand how the statement that "cavalry costs three times as much as infantry" got in this text book, or how, having arrived there, it was permitted to remain.

Even in the poorly paid conscript armies of Europe, with the high prices of horses and of forage which reign there, it is doubtful if this statement is approximately true.

Is it possible that this phrase has come down to us from the Middle Ages when the infantry were "a ragged rabble" and cavalry "knights in armor."

If so, let it be relegated back to the Dark Ages, where it belongs.

\* \* \* \* \*

Here in these United States of America in the year of 1909, in this age of progress, we have especial need of a large force of cavalry; first, because in time of war cavalry can not be improvised; secondly, because in case of war on this continent great masses of cavalry would be indispensable; and, thirdly, because our cavalry on foot, is man for man equal to infantry; and mounted, has a mobility which infantry can never rival. If for this mobility we pay thirty per cent. more, it is worth it.

JAMES PARKER,  
*Colonel Eleventh Cavalry.*

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#### NOTES ON JAPANESE CAVALRY.

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In Japan I saw detachments of cavalry, infantry and artillery marching along on the roads; and, through the courtesy of Colonel James A. Irons, Fourteenth Infantry, our Military Attache at Tokio, obtained from the Secretary of War authority to visit the Imperial Cavalry Guard at Tokio, which I did on October 23, 1908.

I was received with the greatest courtesy by the Colonel, his adjutant and other officers and saw the barracks, kitchens, bath rooms, stables, riding hall, paddocks, etc. Each troop of the Imperial Guard has about 160 men.

The work while I was there was altogether by squads, some were in the riding hall, some breaking horses in the paddock, some at fencing and jiu-jitsu, some at school; squads alternating at these duties. All were kept busy under the

supervision of the officers, who appeared intelligent and instructed in their work.

The guard is armed with carbine and saber, and, for ceremonial occasions only, with the lance. For ceremonies they also use a saddle cloth for the men.

Their carbine is very short and light and, in my opinion, is inferior to our rifle. It has a milled circular disk at the base of the breach block which can be moved by the pressure of the flat of the hand and controls the cutoff. This is an improvement due to their experience in Manchuria, where many men froze their fingers when they removed their gloves to use the cutoff. This is worthy of adoption by our army. Their saber is good; the saddles are padded and inferior to ours; they use the double bit.

Their fencing was very good; they used the mask and pads and their fencing sticks are excellent, being made of bamboo sticks fastened together, rendering the stick strong, flexible and yet not dangerous.

In my opinion they used the thrust too little, and their main object seemed to be to beat down their adversary's guard, seize him and, throwing him by jiu-jitsu, thrust the saber through him.

If a man was off his guard, their method is excellent. A good fencer would not need jiu-jitsu.

Their cavalry horses are small and inferior to ours; the soldiers are of course small, but very sturdy looking. The general characteristics of the Japanese people are too well known to need description, but I was especially struck with the friendly attitude of all classes to the Americans, not only during the presence of our fleet at Yokohama, but elsewhere and at all times.

The officers of the Imperial Guard seemed to be especially anxious to impress upon me their abhorrence of war in general and their especial anxiety to avoid any cause for the same with United States.

They were also of the opinion that had the Japanese more cavalry in the Russian War, their success would have been greater, as they could then have clinched their victories.

"OBSERVER."

CAMP GRÉGG, P. I., December 29, 1908.

*The Editor Cavalry Journal, Fort Leavenworth, Kansas.*

DEAR SIR:—In overhauling some old papers I found the enclosed photographs, which should be of interest to your readers, No. 1 especially to the First and Tenth U. S. Cavalry.

The history of the monuments portrayed is as follows:



MONUMENT AT LAS GUASIMAS IN MEMORY OF THE MEN OF THE FIRST AND TENTH U. S. CAVALRY WHO WERE KILLED HERE IN 1898, DURING THE SPANISH-AMERICAN WAR.

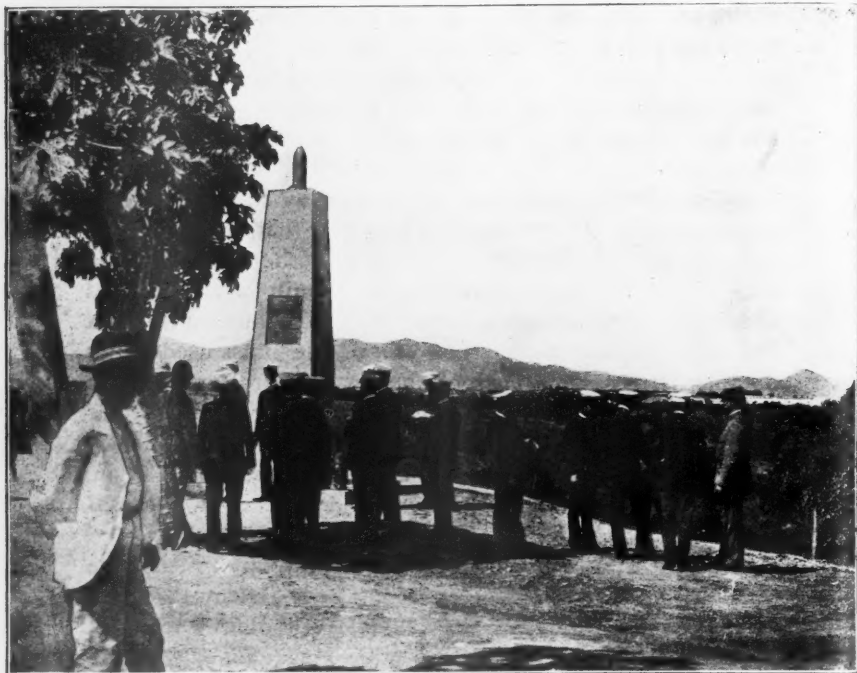
In the fall of 1900 a party of officers riding over the Santiago battlefields stopped at the monument that had been erected by the "Rough Riders" in the memory of their men and to commemorate the action of the regiment at Las Guasimas. The feeling in all was that the action of the regulars and their dead ought to be also commemorated. The Division Commander, General Wood, gave voice to this by

saying: "I would like to have a monument erected on the road to the men of the First and Tenth Cavalry, and San Juan Hill secured and a monument erected there to all the troops engaged." The Department Commander, General S. M. Whitside, heartily approved of the idea and, as I was engineer officer, it fell to me to put them up.

Participators in the Las Guasimas fight will recognize the site of that monument. It stands in front of the ruins of a house on whose wall is a peculiar sun dial. The shadow is cast by a horizontal bar set at the convergence of the lines. The Siboney road, up which the First and Tenth Cavalry advanced, debouches from the jungle just to the right, east of the monument and passes in front of it. To the left (west) is the open space, perfectly commanded by the heights that were occupied by the Spaniards, where our casualties occurred. At X on the picture were buried the men who were killed in the fight. The monument is built of field stones obtained nearby and cement mortar, with an ancient Spanish shell on top. The tablet is of bronze, the brass used being obtained from the wrecks of the Spanish cruisers, molded and given by the founder, Aragon, of Santiago de Cuba. It is inscribed: "In Memory of the Men of the First and Tenth United States Cavalry, Young's Brigade, Wheeler's Division, who were killed in the action here, 23d June, 1898, Spanish-American War."

Getting a monument on San Juan Hill presented more difficulties. The old block house had been destroyed, except its foundation, which had been built over and was occupied by a dairyman. A corral surrounded the house and the space between the Spanish trenches and ours was in a filthy condition. Pending negotiations to purchase the land, the owner was persuaded to vacate the northwest corner of the foundation of the old block house, and the monument was erected there. The land purchased was bounded as follows: Starting at the center of the small stream on the Santiago-Siboney road east of the intersection of that road with the El Caney road, thence east along the Santiago-Siboney road to its intersection with the San Juan River; thence south along that river to its junction with the small stream from the

starting point; thence northwest along the small stream to the starting point. This triangle of land was purchased for a park and, in connection with the new water supply, it includes the bloodiest part of the field and ridge and the surrender tree. It was placed under charge of "Major" Barber, the Sanitary Inspector of Santiago, and he cleaned it up and



MONUMENT ON THE SITE OF THE NORTHWEST CORNER OF THE OLD SAN JUAN BLOCK HOUSE.

In memory of the officers and men of the U. S. Army who were killed in the assault and capture of San Juan Hill and the subsequent siege of Santiago in July, 1898. Spanish-American war.

built a park-keeper's house about one hundred feet to the north of the monument (site of the old block house). The site of the park-keeper's house was mistaken by Richard Harding Davis, who accompanied the Santiago Battlefield Commission in 1906 (see *Scribner's*, 1906,) for the block house



site. The park was accepted by President-elect Palma on behalf of the Cuban people shortly before the withdrawal of our troops in 1902. His address was very eloquent; he charged the Cubans to preserve San Juan Hill as the Bunker Hill of Cuba.

The photograph (2) shows the monument on the occasion of the visit of the North Atlantic Squadron in 1901. It is built of the best concrete, and except for the ravages of tourists would be very enduring. The tablet is inscribed: "In memory of the officers and men of the U. S. Army who were killed in the assault and capture of this ridge and subsequent siege of Santiago, July, 1898, Spanish-American War."

I have never seen any mention of the two monuments at Las Guasimas, that of the Rough Riders and of the First and Tenth U. S. Cavalry, and while memory is now dim as to the action there, it seems proper for the JOURNAL to record that the action of the dismounted cavalry at Las Guasimas is commemorated in stone and bronze.

Very truly yours,

S. D. ROCKENBACH,

*Major, Philippine Scouts.*

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## REORGANIZATION.

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ARE YOU INTERESTED IN CAVALRY REORGANIZATION? IF NOT,  
WHY NOT.

**B**OTH the President and Secretary of War have recommended to Congress that the cavalry be reorganized because its present organization is obsolete. Is it obsolete?

Study the following organization of cavalry in modern foreign armies.

In this table the word "squadron" indicates a major's command and the word "troop" indicates a captain's command.

It should, however, be borne in mind that foreign armies use the word "squadron" to mean a captain's command of about 150 men.

	Platoons in Troop.	Troops in Squad'n	Troops in Regt.	Squad's in Regt.	Men in Platoon.	Men in Troop.	Men in Squad'n	Men in Regt.
U. S. ....	4	4	12	3	24	100	401	1,236
Germany ...	4	0	4	0	40	150	0	600
France. ....	4	0	4	0	40	159	0	600
Japan. ....	4	0	4	0	40	150	0	600
Austria. ....	4	0	6	0	40	150	0	900
Russia. ....	4	0	6	0	40	150	0	900
Italy. ....	4	0	6	0	40	150	0	900
England. ....	2	2	6	3	45	93	186	531 to 715

If our organization is obsolete and needs reorganizing, what is the most efficient basis of organization? The cavalry should be able to examine the matter critically. There should be some underlying principle on which to build this organization. I have in mind the following two systems, which could be built about as follows:

#### THE THREE UNIT SYSTEM.

	IN PLATO'N		IN TROOP.			IN SQUADRON.			IN REGIMENT.			24 REG'TS.	
	Men.	Offi- cers.	Plats	Men.	Offi- cers.	Tr'ps	Men.	Offi- cers.	Sq'd.	Men.	Offi- cers.	Men.	Offi- cers.
Totals	24	.....	3	80	3	3	241	12	3	756	41	18,144	984
Lieuts. . . . .	.....	.....	.....	.....	2	.....	.....	8	.....	.....	24	.....	576
Captains . . . . .	.....	.....	.....	.....	1	.....	.....	3	.....	.....	12	.....	288
Majors. . . . .	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	3	.....	72
Lt. Cols. . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	24
Colonels . . . . .	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	24

This system is favored by most cavalry officers and is the one recommended by the Reorganization Board. It should possess some advantages; if so, what are they? To me it possesses the following disadvantages: 1. It cannot be used for double-column formations. 2. It does not lend itself to use by wings. 3. If three lines are used, they are naturally the same size. 4. It is not flexible and cannot be cut in two.

## THE FOUR UNIT SYSTEM.

	IN PLATOON		IN TROOP			IN SQUADRON			IN REGIMENT			25 REGTS.	
	Men.	Officers.	Platoons.	Men.	Officers.	Troops.	Men.	Officers.	Squads.	Men.	Officers.	Men.	Officers.
Totals..	40	1	2	86	3	4	345	15	2	723	35	18,075	875
Lieuts..								10			20		500
Cpts..					1			4			11		275
Majors..								1			2		50
Lt. Cols.											1		25
Cols..											1		25

## ADVANTAGES OF THE FOUR UNIT SYSTEM.

1. It favors all wing formations. Wing formations favor successive withdrawals such as would be used in rear guard actions, one wing withdrawing under the cover of the fire of the other. Von Bernhardt, who is perhaps the best German authority, says, "Against artillery and infantry the wing system should always be used." It lends itself readily to an attack on both front and flank. It will be seen from Table No. 1 that all European organizations are suitable for wing formations. They drill it extensively.

2. It favors placing equal forces on each flank of the infantry line.

3. It favors the double column, which is best for rapid deployments to either front or flank. To the front both wings can be brought simultaneously on to the line.

4. It makes it easy to use or avoid the use of three lines.

5. In any attack, the attacking line should equal the troops held out. That is, the attacking line should equal both support and reserve. It, therefore, favors an attack with one-half in the attacking line, one quarter in support and one-quarter in reserve.

6. It has great flexibility and can be cut in two parts down to a very small unit.

7. It requires no change in the drill regulations.

The above tables showing twenty-four and twenty-five regiments are the equivalent of our present organization at war strength, and provide for no increase of enlisted strength.

All European nations have, in addition to what is shown in Table 1, a depot squadron or troop. In Europe the regi-

ments are localized, and the position of the depot troop never changes. I do not deem such an arrangement suitable to our present needs.

A small regiment enables cavalry to be assigned as divisional cavalry without breaking up a regiment. A regiment of 1,200 sabers is too large to be assigned to a division. An European brigade is the present size of our present regiment. A division is composed of three brigades.

In arguing that a smaller regiment than our present one is a more efficient one in time of war, it follows that some provision should be made to maintain it at its full strength.

There should be no such thing as peace strength. The cavalry should be kept at its war strength all the time. When war breaks out cavalry will be needed at once, and needed badly.

If, in time of war, cavalry must take on a lot of green men and horses, its mobility will be paralyzed for at least three months.

The same authority above quoted says, "The system adopted by the infantry of raising cadres to war strength by absorption of reserve men is for the cavalry fundamentally impossible," and again, "I protest against any scheme which would seek to swell out the ranks or create new units on mobilization." We all saw how it worked during the Spanish war. By taking on fifty new men and horses, the efficiency of the cavalry was paralyzed for six months. The establishment of a remount depot is in the right direction. If it could also be made a recruit depot, then we would have something of great and lasting value. Our losses in time of war could be filled with trained men and trained horses. Men and horses temporarily disabled could be sent there to recuperate. Old soldiers, too old to take the field, could be sent there to train recruits. Old horses, too old to take the field, could be sent there for the use of recruits. Fort Reno is an ideal place for such a depot. Others should be established without delay.

As regards the machine-gun platoon, it may be that the Benét Mercé or Hotchkiss portable will supply the demand. The present gun does not. In my humble opinion, cavalry

cannot be tied down to a pack train without compromising its mobility. The most modern thought on cavalry is that while its tactical use has been restricted its strategical employment has been very much extended. In its strategical employment the watchword is "Mobility," which is the prime condition of its efficiency. Why, then, tie it down to a pack train?

Every cavalry regiment should have a light wagon with a canvas ponton boat and enough material for two bays. This would be sufficient to bridge a stream about thirty feet wide. To this proposition I would attach the condition, the same as to all other cavalry transportation, that it should be able to follow the column at a trot.

ALONZO GRAY,  
*Captain, Fourteenth Cavalry.*

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#### POSTAL SERVICE IN WAR.

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THE following extract\* from the personal memoirs of General of Infantry Baron L. v. Seddöler, Aid-de-camp to Emperor Alexander II and Russian attache to the Tenth Prussian Army Corps during the Franco-Prussian War, seems worthy of deep study and emulation in our army, especially so when we recall conditions in regard to the mail service obtaining in our service during the days of Santiago and the Phillipine Insurrection, when it was simply a matter of happy-go lucky whether or not those in the field received or could send any mail matter:

"What struck me as the best feature of the entire interior management, and as the most considerate, during the war was the Prussian Postal Service. The Germans fully realized the vast importance of keeping up close communication between the troops in the field and their homes, and vice versa, and utilized all possible means to gain the confidence of the people and of the army, and the department tried to

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\* Published in Beiheft to Militär Wochenblatt, February, 1909.

do this through quick and correct transmission and delivery of all mail and parcels of every description. Most of the credit for this should be given to the well known chief of the postal service, v. Stephan. He gave this important matter his entire and unflagging attention; he personally visited the theater of operations several times to infuse energy and activity into the postal system. It was he who originated the franking system of all mail matter from and to the soldiers in the field. There was a central postoffice with each corps (the field postoffice) and its twenty-two officials were apportioned amongst the divisions and the artillery; there were twenty-eight mail carriers (field mail carriers) to each corps, and they were mounted in part. At a fixed hour daily, if ever practicable, and without fail immediately after each battle, these mail carriers went along the lines to gather up mail into their leather sacks, especially the postal cards which the Government furnished each soldier free of charge. On the battlefield it was their duty to ask the wounded whether they wished to write home, furnishing them the materials to do so, and they often wrote themselves at the dictation of the dying. The chief endeavor of the field mail service was to forward letters and cards of the dying with the least possible delay—and that not to the addresses direct, but to the mayor of their town or village or to some minister of the gospel, whose lawful duty it then became to communicate the contents in person to the relatives concerned before delivering the letter or card."

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#### NEW SHRAPNEL GRENADE.

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From *Arms and the Man*.

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"TESTS have been completed at the factory of the Cotton Powder Co., at Faversham, England, of the new shrapnel grenade.

"The tests proved beyond any doubt that these grenades could be projected from the service rifle with great accuracy

for a considerable distance with absolutely no danger to the man behind the gun. Of course the device is intended for high angle fire, and works on the principle of a ramrod left in the barrel on top of a mere powder charge, *i. e.*, a blank cartridge. The rod which supports the grenade enters the bore for about nine inches or so, the weight of the grenade being about one and one-half pounds, and a special blank load is used.

"The tests, when completed, showed no damage to the barrel of the rifle, and the grenade flew in a line much like that taken by an ordinary sky rocket, the rod of the grenade taking the place of the stick and keeping it nose on. When the grenade is arrested in its flight by contact with any immovable or heavy object, an internal weight slides forward striking a percussion cap and this in turn detonates the explosive charge in the body of the grenade. Tonite was the explosive used.

"A split pin engages the sliding weight and prevents any explosion of the grenade, and this pin is not removed until just before the actual instant of the rifle's discharge. The detonator plug is screwed on the head of the grenade, and this affords greater measure of safety because the plug can be removed easily and the grenade carried without it until it is desired to fire one of them, when the plug is capable of being instantly affixed.

"The tests proved that upon impact or explosion the grenade was going to make the vicinity of the detonation a very uncomfortable and unhealthy locality. Jagged pieces of metal and shell were profusely scattered and did considerable cutting up. The tail or metal rod even, is scattered into fragments, and the charge is sufficiently heavy, four ounces of tonite, to speak for itself.

"The length of rod used on the grenades would increase the range possibilities, and, as the recoil is not excessive, the rifle grenade can be fired either from the shoulder or the prone positions, or with the butt resting on the ground, the last method, of course, being preferable.

"The designer showed during the tests that dropped from a height of four feet, the grenade did not receive suffi-

cient jar to detonate it, but a six foot fall accomplished that. A bullet fired into the four ounce tonite charge suspended from a target merely tore through the shell and powder without causing explosion, so that it is not dangerous for the soldier to have one or two of these grenades on his person.

"The propelling blank charges were approximately the same as standard issue of blank ammunition except that they were loaded with a heavier charge of cordite, and the inventor claims that a full service cartridge, with the bullet removed, would answer for the propelling charge. The range at which the tests were conducted was 300 yards."

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#### A NEW AUTOMATIC PISTOL.

THE Piper Arms Factory, of Liege, Belgium, is making an automatic pistol for the Spanish Army. This pistol was invented by a German named Bergmann and is similar to the Mauser pistol. The magazine is placed in front of the trigger guard and is so arranged that it may be loaded by removing from the pistol, as in the Luger or the Colt, or by leaving the magazine in the pistol and loading with a clip similar to the Mauser. The pistol has a four-inch barrel and is ten inches in length. Caliber .354; number of shots, six.

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#### WIRELESS TELEGRAPH EQUIPMENT FOR CAVALRY.

From *Broad Arrow*.

THE *Fahrbücher für die deutsche Armee und Marine* reports an important improvement in wireless telegraph equipment for cavalry, whereby a range of about forty-six miles is obtained without any addition to the weight of the outfit (approximately 440 lbs.), and notwithstanding a reduction in the length of the poles from forty-nine feet to about thirty-nine



feet. The entire set can be transported by four pack animals or carried by eight men. Recent trials between Berlin and Rheinsberg, distance seventy-five kilometers, are said to have yielded entirely satisfactory results.

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## SECOND LINE CAVALRY.

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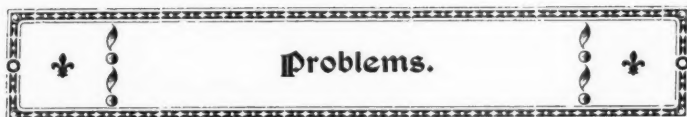
IN the militia, under the latest law, we have a second line of infantry of about 100,000 men, but we have practically no such reserve of cavalry. There are a few excellent organizations of militia cavalry in or near large cities. They own their own mounts and are mostly made up of men of means and ability, who, while they are the very best quality of men, will never serve as cavalry in war. The reason is clear. These men are of the kind that would make volunteer officers, and they would inevitably go to such duty in case of war. Only a few other militia cavalry organizations exist. These are, for the most part, cavalry in name only, being mounted only semi-occasionally and then on scratch horses hired by the day. The men best qualified for service in second line cavalry are farmer boys who live in small communities where they are too much scattered to form militia troops. These men are of the rough and ready kind, used to finding their way about in the country and able to make shift to care for themselves and their horses and equipment with such materials as will be found in the field. The question that I put is this: "Can we secure a second line cavalry made up of men who would be really fitted for cavalry work in war?" The writer will attempt no answer further than a statement of how Switzerland makes up her cavalry from men of scattered rural communities.

Switzerland has no standing army. All her cavalry is thus militia. A remount depot purchases all the horses, which are about three and one-half years of age when purchased. The horses are first sent to a detention station annexed to the depot and kept there until acclimated. After

six weeks training begins. At the end of two months the horses are moved up to the main depot, where training continues. All training is done by civilian trainers, the stable work being also done by civilians. At the end of two to four more months the animals are quite good in the three gaits, can jump in hand, obey the aids without hesitation and *drive easily in harness*. The horses are then divided and sent to the cavalry training grounds, where their instruction continues, still under civilian trainers. With four months here their instruction is completed. The horses are now divided into: 1. officers' mounts. 2. horses with certain curable vices (sold to old soldiers whose horses have died, etc.); 3. horses for recruits, and are sold to the men who are to ride them. Horses are sold at cost price. In case more than one man wishes the same horse they are permitted to bid it off, as at an auction. The buyer pays down one-half the purchase price, draws a set of equipments and rides home. He is entitled to use the horse, saddle and bridle as much as he likes. Thereafter for ten years the recruit serves in training camps a couple of weeks a year and is liable to call in case of war. When called out he reports at the assembly point mounted, armed and equipped. Each year the government returns to the soldier 10 per cent. of the money deposited. At the end of ten years the horse becomes the property of the buyer. If the horse becomes seriously ill the soldier has the privilege of taking him to a remount hospital for treatment; if he dies he is replaced under arrangements varying with the circumstances.

This system does not seem to meet our wants at the present time, but it may be worth remembering for future consideration.

E.



### PRIZE PROBLEM NO. 9.

*Editor Cavalry Journal.*

DEAR SIR:—Four solutions were submitted to Prize Problem No. 9. Those of "Arab," "Batangas" and "Sheridan's Drive" were along very similar lines and provide for defensive action. "Corporal Dimm" takes the offensive.

While "Corporal Dimm," in taking the offensive, shows commendable dash and audacity, this is a situation which requires a stubborn resistance against a superior force, whose superiority must be equalized by the position itself and success made sure. "Sheridan's Drive" leaves his reserve squadron at Atchison Cross and sends his other squadrons, one by Frenchman toward 7, the other by Hancock Hill to 15. His battery goes to Wagner Point. He himself (as Colonel "A") takes position on Atchison Hill. These dispositions disperse his force at the start more than necessary and observation from Atchison Hill is not so good as from Bell Point.

"Arab" and "Batangas" have nearly parallel solutions, except that "Arab" fails to give his intentions as required in the second requirement of the problem. "Batangas" sends one squadron toward Hancock Point, while "Arab" sends three troops, keeping one with the battery. "Batangas" is ready to open fire at 4:33 P. M. with his battery and "Arab" at 4:40 P. M. "Batangas" sends verbal orders to his advance guard commander by a staff officer; "Arab" by a written message.

The committee believes that the solution by "Batangas" is the best and recommends that the prize be awarded to its author.

A. E. SAXTON,  
*Captain, Eighth Cavalry.*

LEROY ELTINGE,  
*Captain, Fifteenth Cavalry.*

MATTHEW E. HANNA,  
*Captain, Third Cavalry.*

In accordance with the above report, the prize for the best solution of Prize Problem No. 9 is awarded to First Lieutenant George W. Winterburn, Ninth Cavalry.

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#### PRIZE PROBLEM NO. 9.

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#### SOLUTION.

##### ORDERS:

Colonel A is directed to prevent interference by the enemy with the Blue Army. Therefore he must prevent the Brown detachment from reaching the Fort Leavenworth or Terminal bridges or from reaching the flanks of the Blue Army.

As the Blue Army will be across the Missouri River during the night June 30th-July 1st he must, at all hazards, prevent their interference until such time as this crossing is completed.

The methods pursued to block the Brown detachment's movements are left entirely to the discretion of Colonel A.

*Enemy.*—It would appear that the enemy's column consisted of one regiment of infantry and one battery of artillery. At 4:12 P. M. the advance guard of the enemy is approaching 17 and the main body is at Plum Creek. At this time, 4:20 P. M., it cannot be definitely determined whether the enemy will march via the 17-H-G road or the 17-15-11 road toward Leavenworth. His best chance of success

would seem to be to reach the Fort Leavenworth bridge via the latter road and place himself on the flank of the retreating Blue forces, with the possibility of being able to capture or destroy the Fort Leavenworth bridge and to shell the Terminal bridge. By proceeding toward Frenchman he might capture the high ground in the vicinity of Atchison Cross, which position would command, more or less, the approaches of the Fort Leavenworth bridge. It is possible that he can expect aid, if necessary, within a reasonable time; that is, some time during the night June 30th-July 1st. The advance toward Frenchman would, however, consume more time and expose his forces to a greater extent than by advancing via the 17-15-11 road. It would appear also that the enemy's means of securing information would be more or less slow; being in a friendly country, however, inhabitants with the aid of horses or vehicles might acquaint him with the Blue cavalry's movements. This danger, however, could be minimized by the rapid advance of the Blue cavalry. The movements and reconnaissance of the infantry must necessarily be slow as compared to the cavalry and the point of the enemy's advance guard could not reach Kerns on the 17-15-11 road until 4:37 P. M.; the reserve about 4:50 P. M., and the main body could not effect a deployment until at least 5:10 P. M. An advance toward Frenchman would consume about the same time. It is to be supposed that the Brown commander, having lately been victorious, would be very aggressive and would attack at first opportunity.

It is possible that, instead of moving his entire force on one of the two roads open to him, detachments might be made to operate on the road not selected for the advance of the main body. This as a flanking movement or as a feint.

Any attempt to move toward Fort Leavenworth via the M. P. R. R. would be very difficult, especially for artillery, and would necessitate the counter-marching of troops and could be successfully opposed.

The enemy will not leave the roads until forced to and thereafter his advance would be difficult.

Our forces consist of the Seventh Cavalry and Eighth Horse Battery. The point of the advance guard should be

in the vicinity of Baker and patrols probably at Frenchman. The head of the main body is at Atchison Cross. It cannot be determined which road the enemy will take, but immediate steps must be taken to block both roads in such manner as to be able to oppose the enemy's main body or detachments wherever they may go. All the early movements of the Blue cavalry will be made under cover (except for dust) and all the movements of the Brown detachment can be definitely determined from the high ground along Sheridan Ridge. The Blue advance guard reserve can reach Frenchman by 4:35 P. M. and the First Squadron could reach Hancock Point by 4:34 P. M., or even a minute or two earlier if more than a ten-mile-an-hour gait was maintained. Deployment could be effected almost immediately, which should find the enemy between Schroeder's and 17 (if on the 17-15-11 road). The horse battery could reach Bell Point at about 4:33 P. M. This should find the enemy as above if on the 17-15-11 road and between branch of Salt Creek and 17 if on the 17-H road. All points on both these roads are between 2,000 and 2,500 yards range. Bell Point would also be a central point from which further movements could be made.

The advance guard could reconnoiter beyond Salt Creek and prepare all bridges in the vicinity of Frenchman for destruction. A position in vicinity of Frenchman could be taken up covering Salt Creek with the strong position in the vicinity of Atchison Cross directly in rear. The advance guard could also act on the enemy's flank, if opportunity afforded.

Third Squadron could proceed to E, or slowly along the Atchison Cross-E-Sheridan's Drive road, where further instructions could easily reach it, and it would be in a position to assist either the First or Second squadrons.

*Terrain* —But two roads are open to the enemy's advance—these have been discussed. The 15-F road could not be used by the enemy during early movements. The valley of the Salt Creek is open and hilly, being cut into sections by Salt Creek and its branches. The valley is commanded east of the 17-H road by the high ground along Sheridan Ridge,

and the entire valley is open to observation from this point. Sheridan Ridge affords excellent defensive positions along its entire length from M. P. R. R. to 1100 Hill, if necessary, which would connect with the Blue rear guard. Cover and roads are available along the greater part of this ridge. Salt Creek and its branches would be difficult to cross except at bridges and would, therefore, afford an obstacle. These creeks are generally commanded by artillery fire from Bell or Hancock Points. An excellent retarding position is afforded in vicinity of Sentinel Hill, and Atchison and Government hills afford a very strong defensive position. The 17-15-11 road east of Kerns passes through a heavily wooded country. The country directly east of Atchison Cross is open. The country between Missouri Bluffs and Missouri River is marshy and practically impassable except along the M. P. R. R. The country south and southwest of Frenchman is very rough and devoid of roads.

*Decision.*—Colonel A must act at once to offset probable moves of the enemy, and he therefore immediately notifies the advance guard commander to reconnoiter toward 17; to prepare for destruction of bridges in vicinity of Frenchman; to oppose any movement of enemy along 17-H road; if enemy is not advancing along 17-H road, to hold himself in readiness at G. Colonel A immediately gallops to Bell Point, accompanied by Second Squadron and horse battery.

The Third Squadron will proceed to E, holding itself in readiness. At Bell Point Colonel A acquaints himself with the further movements of the enemy, and if found advancing on the 17-15-11 road, the Second Squadron is ordered to Hancock Point to oppose this movement, the Third Squadron being ordered to its support and the First Squadron at Frenchman moved as may be necessary.

If enemy is on 17-H road, the Third Squadron at E would be ordered to reinforce the First Squadron, which will resist and eventually fall back to strong position at Atchison Hill. The Second Squadron will observe the enemy's movements from Sheridan Ridge.

The artillery will immediately open fire upon arrival at Bell Point, seeking the enemy's main body and artillery.

If enemy advancing on the 17-15-11 road, artillery could, if necessary, be moved to Hancock Point, two guns at a time.

It is thought Colonel A's command could be readily concentrated to meet any emergency. These movements must be made immediately, as time can not be spared to wait further information.

Colonel A could easily hold the enemy until dark, after which no concerted action could be made by them if roads were properly guarded.

If cavalry buzzer lines were not available to connect the various squadrons and detachments, the high points—Sentinel Hill, Bell and Hancock Points—would be used for visual signal stations.

As orders must be issued immediately, verbal instructions would be sent to the commanding officer of the advance guard and to the commanding officers of the Second and Third squadrons and horse battery. If written, it would take the following form :

HEADQUARTERS BLUE DETACHMENT,  
ATCHISON CROSS ROADS, KANS., 30 June, '08, 4:22 P. M.

FIELD ORDERS {  
No. 1. }

1. A Brown detachment, estimated at one regiment of infantry and one battery of artillery, is advancing toward Leavenworth via Kickapoo. Its advance guard is near 17 and the head of the main body is near Plum Creek. Our army is crossing the Missouri River by the Terminal and Fort Leavenworth bridges; crossing will be completed to-night. Our rear guard will hold high ground 28-42-50.

2. The Seventh Cavalry and Eighth Horse Battery will prevent the enemy's interference with our main body.

3. (a) The Eighth Horse Battery will proceed rapidly to Bell Point and immediately open fire upon the enemy's main body and artillery.

(b) The First Squadron (advance guard) will reconnoiter toward 17 and if enemy found advancing in force on Frenchman to destroy bridges in that vicinity and oppose advance. If enemy not advancing in force, hold squadron in readiness at G.

(c) The Second Squadron will proceed rapidly toward Hancock Point and oppose any advance of the enemy in that direction.

(d) The Third Squadron will proceed to E, holding itself in readiness for further orders.

4. The commanding officer will be found at Bell Point.

By order of Colonel A.

X,

*Captain and Adjutant, Seventh Cavalry,  
Adjutant.*



By staff officer to commanding officer advance guard (it is thought that this method would be faster than by using buzzer line, if available, for this short distance).

To commanding officers, Second and Third Squadrons and Horse Battery and staff, who would be assembled, if time permitted. By orderly to commanding officer Blue forces at Leavenworth.

If no buzzer communication visual signal stations would be established on Sentinel Hill, Bell and Hancock Points.

(Signed) BATANGAS.

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#### PROBLEM NO. 10.

(CAVALRY JOURNAL, January, 1909, Page 671.)

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#### SOLUTION.

Major A's orders are "*to reconnoiter to the north and west of Leavenworth and to drive back small parties of the enemy.*" In other words, he has an offensive mission. Several courses of action are open to him. He may attack; he may occupy positions and stand on the defensive; he may fall back on his infantry, or he may ride around the enemy and reach his rear. He must first decide which of these he should undertake, in view of his mission, and then he must decide on the detailed tactical dispositions to accomplish what he has undertaken.

At 11:05 A. M. Major A is on Avenue Hill with his staff and advance guard commander and his command is located as stated in the problem. From his patrols to the west of 60 and north of Leavenworth he has received no information; this indicates that no enemy has appeared in those directions. For the time being the only enemy to be considered is that approaching on the Atchison Pike.

The information of the enemy from the patrol on Atchison Hill is positive so far as it goes. It consists of cavalry only and was two miles west of Atchison Hill at 10:45 A. M. As to its strength nothing definite is stated and it is useless

to speculate on this point. Major A has seen the led horses of half a troop but for all he knows this is the leading element of the advance guard of a strong cavalry column. That the enemy has dismounted indicates nothing, except that he intends to fight, but as yet it is not clear whether he will attack or defend. There can be little doubt but what this is the column or head of the column seen by the patrol from Atchison Hill, for it could easily make the two miles and dismount to fight on foot in the twenty minutes that have elapsed since 10:45 A. M.

Major A must make his decision with but very little knowledge of the enemy unless he simply waits where he now is while seeking more information by reconnaissance or otherwise. That he should not do this will become apparent as the situation is more thoroughly analyzed.

Much may be fairly inferred as to the enemy's probable intentions. It is known that a Red force is, or recently has been, in the vicinity of Atchison. It may have heard of the intended junction of the two Blue columns at Leavenworth and may have marched to prevent this junction by seizing the bridges over the Missouri at Leavenworth and Fort Leavenworth. The possession of the range of hills through 28, 22 and 16 is necessary to carry out such an enterprise. If this assumption that the enemy is in the vicinity in force be true, the possession of these hills is no less necessary for the Blue brigade if it is to succeed in joining its reinforcements from Missouri. In the event that these hills play so important a part in this operation, that side will have a great advantage which gets possession of them at the outset. This is a view of the situation that Major A must consider, although it may later develop that the enemy's infantry and artillery are nowhere near Leavenworth.

This view of the situation furnishes the most important reason why Major A should attack at once and without waiting for further information, for by attacking at once he may succeed in obtaining possession of the hills, whereas, by waiting, the force at Atchison Cross may speedily be reinforced by additional cavalry, or even by infantry, within the next half hour or hour. But there are other reasons why he

should attack. His general mission is aggressive. He is to drive back small parties of the enemy and he is to reconnoiter to the north and west of Leavenworth. To do either effectively, he must attack. If the hostile cavalry is strong and is well handled, it will meet and block Major A at some other point on the ridge if he attempts to ride around the Atchison Cross position and he will have to fight just the same, only at a later hour and different place. If it is weak, he should, under his orders, attack and drive it back.

With the ridge in his possession he may be able to hold it, even should the hostile infantry be near, until his own infantry can come to his support. At 10:45 A. M. it was five miles in rear and now, at 11:05 A. M., about four miles in rear. It can be up in an hour and twenty minutes.

So Major A's initial decision is to attack at once. Now as to how the attack will be made. The country north of Leavenworth is open and easily traversed by cavalry, but movements across it would be plainly seen by the hostile cavalry on the hills and it could move with absolute certainty to meet Major A's advance should it be made across this open ground. Moreover, the dismounted attack, when it began, would be made over ground furnishing poor cover. A wide turning movement through Fort Leavenworth and the woods to the west, as well as a wide turning movement in any other direction, is open to the objection that it takes too much time, even were it advisable for other reasons. The terrain west of the 62-14 road furnishes good cover for an enveloping or turning movement against the enemy's right flank. In view of the uncertainty as to the enemy's strength, it does not seem wise to make a frontal attack with the whole force along the 62-14 road. The best plan will be to combine an attack along this road with an attack against the enemy's right flank.

The force sent against the hostile right had better be kept in close supporting distance, during the movement, to the remainder of the force attacking along the road, for the enemy may be quite strong and might make the most of any such splitting up of the Blue squadron. For this reason it is taking chances to send a part of the force via the 60-56-

58-22-20 road and trail to strike the hostile right. At 58 it would be nearly a mile from Atchison Cross with very broken country intervening. It would be safer to send this part of the force across country from 62 to the trail along the spur west of 62, thence via this trail to 20 and the vicinity of the enemy's right.

For similar reasons, the force attacking along the road should be strong enough to look out for itself for some minutes and to hold the enemy by its attack to his position at Atchison Cross and thereby prevent him, as far as possible, from meeting the attack against his right. The reserve may follow the attack along the road or the force sent along the trail. Along the road is the safer place for it, but along the trail it may have the best chance for brilliant results. Due to the uncertainty as to the enemy's strength, the more conservative plan is the wiser. By attacking with the bulk of the troops along the road victory will be about as certain as it would be were the bulk of the troops sent along the trail, and defeat in the former case is not nearly so liable to be disastrous, for the troops on the road can fall straight back on their infantry, while those on the trail are in danger of being cut off. However, any one of the following combinations is good, although the last probably is the safest. One troop along the road and three along the trail; two troops along both trail and road, and three troops along the road and one along the trail.

Consequently, Major A decides to attack the enemy at Atchison Cross, enveloping his right flank; to have Captain A (commanding the advance guard) attack along the 62-14 road with the advance guard troop and Troop "B"; to have Captain C move along the trail on top of the ridge, via 20, with Troop "C" and attack the enemy's right and rear; to have Troop "D" follow Captain A as reserve.

He then issues the following verbal orders to Captain A, who is with him:

"We will attack the enemy at once in front and on his right flank. Attack with your troop and Troop "B," dismounted, along the west of the main road. Captain C will take his troop, mounted, along the trail on top of the ridge and attack the enemy's right and rear. Troop "D" will follow you as re-

serve. I will direct Captain B to you immediately. I will be with the reserve. Move out at once."

He then directs the adjutant to prepare a message for the brigade commander and gallops back to the main road, tells Captain B to report with his troop to Captain A, assembles the officers of Troops "C" and "D" and issues the following verbal orders:

"The enemy's cavalry is in position across the road about 1,500 yards to our front. About fifty of his led horses were seen moving along the road up the hill. Further than this I know nothing definite of his strength. Our infantry is about four miles in rear. We will attack at once against the enemy's front and right flank. Captain A will attack, dismounted, along and west of this main road, with Troops "A" and "B." Captain C, take your troop through the woods to the west, follow along the top of the ridge and attack the enemy's right and rear. Patrols are now out on roads to the west. Captain D, your troop will follow Captain A as reserve. Remain mounted for the present. I will accompany the reserve."

The message to the brigade commander is now signed and sent.

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#### PROBLEM NO. 11.\*

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(See *Map of Fort Leavenworth published in the Cavalry Journal for July, 1907.*)

#### *General Situation.*

A Blue (Southern) and a Red (Northern) army are approaching each other but are not in contact. Each knows of the existence of the other, but not of its exact location.

#### *Special Situation—Blue.*

The Blue army is advancing, its cavalry about thirty miles ahead of the army. The extreme right of the cavalry screen is the First Cavalry, Colonel A commanding, without field train, which, having accomplished a special mission at

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\*Solution will appear in the next number of the CAVALRY JOURNAL.

Leavenworth, has resumed its march towards Kickapoo. No hostile forces have been encountered. At 4:00 P. M., when then the head of the main body has reached 17, Colonel A received the following message:

HEADQUARTERS CAVALRY DIVISION,  
ST. JOSEPH'S CHURCH, KANSAS.

May 1, 1909, 2:40 P. M.

*Commanding Officer First Cavalry, Leavenworth:*

Our advance parties have had a few skirmishes with hostile cavalry. To-night Division Headquarters will be at St. Joseph's Church, (six miles west of G). Halt for the night and send officer for orders at 9:00 P. M.

By command of Major General X.

Y Z,  
*Chief of Staff.*

NOTE:—Fort Leavenworth is an ungarrisoned village. Missouri is a neutral State. The country is hostile to the Blues.

Required:

1. Colonel A's dispositions.
2. His reasons for same.



## Editor's Table.

### OUR BOOK DEPARTMENT.

As was stated when this department was first started, its object is to supply our officers, particularly our members and subscribers, with such new military works as were deemed of worth to the military student and at the lowest practicable cost.

Many officers are so stationed that they do not have the opportunity of examining books before ordering them; in many cases they have no idea where they are published or can be purchased, and in other cases they do not know exactly the title of the book wanted or simply want a book or books on certain subjects. In such cases it was thought that the Association, being here, where it has access to the Army Service Schools library, and in touch with student officers and instructors as well as having at hand book catalogues from all military publishers, could be of assistance to our brother officers in securing what they desired and at the same time at a reduced cost.

The growth of the department has been far beyond our expectations and it is believed that it is rendering valuable service to our members.

Where our contract with the dealer does not forbid it, the discount obtained is divided between the Association and the purchaser, if he be a member of the Association or a subscriber to the JOURNAL, but in other cases the full list price is charged. Of course it is necessary to make a profit on this business in order to cover the cost of the extra postage, wrapping material, advertising certain books, where we are the special or general agents, etc., which is no small sum, and the extra clerical service this work entails.

In some cases the Association has assumed the work of publishing books written by officers where the authors have not the time or, owing to their frequent changes of station, the opportunity to attend to the business and, in some cases, the inclination to assume such work. These books that have been published by the Association so far are those written or compiled by instructors at the Service Schools, and which they have been urged to have published in order that the service at large might benefit by their work. In other cases the Association has assumed the special or general agency of certain books which are advertised in the JOURNAL.

Recently the association has accepted a proposition to become the general agents for the United States for the English translation of the "German Official Account of the Russo-Japanese War," and the new work on Grant's Campaign, 1864-5, "The Wilderness and Cold Harbor," of the Pall Mall Military Series.

A review of the first volume of the German Official Account of the Russo Japanese War, "The Yalu," appeared in the last number of the JOURNAL and it was hoped to have the review of "The Wilderness and Cold Harbor" ready for this number, but the reviewer has not found time to prepare it, although he states that it is an excellent work. The second volume of the German Official Account of the Russo-Japanese War, "Wa-fan-gou," is just off the press and the third volume, "Liao-yan," will be published in the autumn.

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#### ANNUAL MEETING OF THE U. S. CAVALRY ASSOCIATION.

The annual meeting of the Cavalry Association was held on Monday, January 18, 1909, with over three hundred members present or represented by proxy. Officers for the year were elected, as shown by the list given on the title page of this number of the JOURNAL.

The report of the Secretary and Treasurer, a synopsis of which is printed herewith below, shows a satisfactory growth



financially, if not otherwise. Notwithstanding that there was quite a large falling off in the receipts for advertising, largely due to the panic of last year, the net resources show a gain of over \$800.00. There was also a falling off in subscribers to the JOURNAL, which it is believed was due also to the prevailing hard times during the year. On the other hand, there was an increase in regular and associate membership and of infantry subscribers, but not sufficient to compensate for the loss of subscribers, as the net loss during the year was forty-three.

While it is a great satisfaction to have the Association on a safe financial basis, yet this is unimportant compared with the fundamental idea of having every cavalryman interested in the Association and its work and to have this interest manifested by their becoming members of the Association. It is not now and never has been the intention of the Association to simply publish a journal and to thereby make money, but to work up and maintain an interest among the cavalry officers of our service in their professional advancement; to cultivate the "*cavalry spirit*" and to effect, through discussions and arguments to be brought to bear on those in authority, changes in organization, equipment, etc., and generally for the betterment of the mounted service.

To do this requires the active coöperation of a large majority of the cavalry officers, particularly of those on the active list.

Notwithstanding the fact that several of the regimental representatives of the Association, that had been selected by their colonels, did good work in inducing many young officers to become members, yet the net gain of only five in the regular membership is disappointing. However, the gain from those on the active list was quite large and the losses were mainly from those on the retired list, by deaths, and from those in civil life, and to this extent the report is encouraging.

It is hoped that the change in our constitution which authorizes a sub-council, to consist of one member from each of the cavalry regiments, will have the desired effect of working up a greater interest in the Association among the

younger officers of cavalry. The younger officers are particularly mentioned because, with three or four exceptions, all of the field officers of cavalry are now members and very few of the captains are not on our list of membership and the over twenty-five per cent. of our officers of cavalry on the active list that are not members, are nearly all from the list of lieutenants and principally the second lieutenants.

The proposed amendments to the constitution were all adopted, nearly all of them almost unanimously, there being a few scattering negative votes only on all of the propositions, with the exception of the one to admit non-commissioned officers to associate membership, against which there were more, although that was carried by a large majority over the required two-thirds vote. The constitution as amended is published in full in this number.

An important matter that was brought up and fully discussed at the meeting was that of forming branch associations at all, or at as many as possible, of the cavalry garrisons. It was argued that these branches, which formerly existed at several cavalry posts, would be of great assistance in carrying out the main ideas of the association, and that through them harmonious action on many important matters of vital interest to our branch of the service might be engendered. It was also suggested that, in case this idea should be adopted, it might be well for the Executive Council of the Cavalry Association to select such subjects as they deemed most important for discussion at all of these several branches, at about the same time, and that thereby each particular subject could receive the best thought and attention of our cavalry officers and the subject thoroughly threshed out at once. The resulting action or best opinion of each branch to be communicated to the Secretary of the Association for publication in the JOURNAL, or a synopsis of all views to be so published. However, this thought was thrown out as a suggestion for future action should other such branches be formed.

It was then determined to form such a branch here at once and a committee was appointed to draft a proposed con-

stitution or rules, to be simple in form, and to arrange for the first meeting.

The question of the petition for a Chief of Cavalry was also discussed and the action of the Executive Council in determining not to forward those received—on account of the knowledge that the War Department authorities did not favor such action—was approved by the Association.

#### REPORT OF SECRETARY AND TREASURER.

##### FINANCES.

Cash on hand January 1, 1908	\$ 1,045 09
Received from members and subscribers	3,109 66
Received from advertisers	1,393 00
Received from sales of books	2,463 91
Received from interest on funds	39 05
Total receipts	\$ 8,050 71
Expended as per classified list	6,648 16
Balance on hand December 31, 1908	\$ 1,402 55
Assets and liabilities December 31, 1908:	

##### ASSETS.

Cash on hand	\$ 1,402 55
Due from members and subscribers	1,418 00
Due from advertisers	396 30
Due for books	409 05
Books on hand, bound and unbound	190 92
Total assets	\$ 3,816 82

##### LIABILITIES.

Due for books	\$ 54 84
Net assets, December 31, 1908	3,761 98
	<u>\$3,816 82</u>
Net assets, December 31, 1907	\$2,959 97
Gain in resources during 1908	\$ 802 01

##### MEMBERSHIP BY REGIMENTS.

<i>Regiment.</i>	<i>Members.</i>	<i>Per cent.</i>	<i>Order.</i>
First Cavalry	42	80.77	2
Second Cavalry	33	62.27	12
Third Cavalry	38	73.08	4
Fourth Cavalry	29	55.77	14
Fifth Cavalry	40	75.48	3
Sixth Cavalry	37	71.16	7
Seventh Cavalry	27	51.93	15
Eighth Cavalry	36	67.95	10
Ninth Cavalry	34	65.89	11
Tenth Cavalry	43	81.14	1
Eleventh Cavalry	36	69.24	8
Twelfth Cavalry	38	71.69	6
Thirteenth Cavalry	37	72.55	5
Fourteenth Cavalry	34	68.00	9
Fifteenth Cavalry	32	60.56	13

## CONSTITUTION.

## ARTICLE I.

## TITLE.

This society shall be known as "The United States Cavalry Association."

## ARTICLE II.

## HEADQUARTERS.

The headquarters shall be at Fort Leavenworth, Kansas.

## ARTICLE III.

## DESIGN.

The aim and purpose of this Association shall be to unite all persons directly or indirectly interested in the cavalry arm of the military service, for the professional improvement of its members and the advancement of the mounted service generally.

## ARTICLE IV.

## MEMBERSHIP.

SECTION 1. This Association shall consist of (1) regular members, (2) associate members, and (3) honorary members.

SEC. 2. The following shall be eligible to regular membership: (a) Commissioned officers of the cavalry of the regular army. (b) Former commissioned officers of the cavalry of the regular or volunteer services, provided their services are honorable. (c) General officers of the regular army and former general officers. Those regular members who are on the active list of the army shall be known as *regular, active* members.

SEC. 3. The following are eligible to associate membership: (a) Persons who are, or who ever have been commissioned officers of honorable record in the regular army (other than those mentioned in Section 2), or in the navy or

marine corps. (b) Persons who are, or who have ever been commissioned officers of honorable record of the National Guard or naval militia of any State or Territory. (c) Former general officers and former commissioned officers of cavalry of honorable record in the Confederate army. (d) Non-commissioned officers of the cavalry service and former non-commissioned officers of the cavalry service of honorable record.

SEC. 4. Honorary members may be elected from men distinguished in military and naval service and from eminent men of learning. They shall be elected as such for the period of five years. Honorary members shall be elected by the Executive Council, and it shall require a two thirds vote of all members of the Council to elect.

SEC. 5. Any person eligible to regular or associate membership may become such upon making application to the Secretary, accompanied with the amount of the annual dues for the first year and upon furnishing satisfactory evidence of his eligibility to such membership.

SEC. 6. Any person or society may become a subscriber for the JOURNAL of the Association; and all persons paying for and receiving the same, but who are not regularly admitted and entered as regular, associate, or honorary members shall be considered merely as subscribers.

SEC. 7. Any member may withdraw from the Association at any time by tendering his resignation in writing, provided he be not in arrears.

SEC. 8. Any person may be expelled from the Association for cause by the Executive Council, but it shall require the consent of two-thirds of the members of the Council, unless the cause be the non-payment of dues or other obligations to the Association, in which case a majority vote of the members of the Council present shall suffice. Any member may be expelled whose indebtedness to the Association is \$4.00 or over.

SEC. 9. Membership shall date from the first day of the month in which the member joins, and his annual dues shall be paid on or before that date in each succeeding year.

## ARTICLE V.

## RIGHTS AND OBLIGATIONS OF MEMBERS.

SECTION 1. Every member of the Association of whatever class shall be entitled to one vote at all regular or special meetings of the Association. This vote may be cast in person or by proxy, in which latter case the authority therefor must be in writing.

SEC. 2. Regular members only shall be eligible to hold office, and only *regular, active* members can vote upon amendments to this Constitution. With these exceptions all members of whatsoever class shall have equal rights and privileges, and be subject to the same obligations, except that honorary members shall pay no annual dues.

SEC. 3. All members, of whatsoever class, shall receive the JOURNAL without other cost than the annual dues. The subscription price to non-members shall be fixed by the Executive Council of the Association, provided that it shall never be less than the annual dues for members.

SEC. 4. The annual dues for all members, except those on the honorary list, shall be two dollars; provided, that whenever the JOURNAL of the Association shall be published bi-monthly, the annual dues shall be two dollars and fifty cents; and, provided further, that whenever it shall be published monthly the annual dues shall be three dollars. All dues and subscriptions shall be paid in advance.

SEC. 5. Additional pecuniary obligations can be imposed upon the members only by an act of the Association at a regular or special meeting, a two-thirds vote of the members present or duly represented by proxy being required to carry such measures; provided, that notice of such intended action shall have been given the members at least three months in advance of such regular or special meeting.

## ARTICLE VI.

## MEETINGS AND ELECTIONS.

SECTION 1. The regular meetings of the Association shall be held once each year at Fort Leavenworth, Kansas, on the third Monday in January.

SEC. 2. Special meetings shall be called to meet at the same place by the President upon the written request therefor signed by fifty members. When such special meetings are called, at least three months' notice shall be given thereof to each member by the Secretary. The same notice shall be given in case of regular meetings. Due notice of any regular or special meeting or of any proposed action to be taken at such meetings shall be deemed to have been given when such notice shall have been published in the JOURNAL of the Association and a copy of the same mailed to each member at the last address furnished the Secretary, or in case of officers of the regular army, the address given in the last Army List and Directory at least three months in advance of such meeting.

SEC. 3. Ten per cent. of the *regular, active* membership of the Association, either present in person or represented by proxy, shall constitute a quorum for the transaction of business.

SEC. 4. The election of officers shall take place annually at the regular meeting of the association. The election shall be by ballot, and a plurality of all votes cast in person or by proxy shall elect.

## ARTICLE VII.

### OFFICERS.

SECTION 1. The elective officers of the Association shall be: A President, a Vice-President, five members of the Executive Council. Their terms of office shall be one year, or until their successors are elected, and all except the President shall be residents of Fort Leavenworth, Kansas.

SEC. 2. The appointive officers of the Association shall be two, viz: An Editor, a Secretary and Treasurer. They shall be appointed by the Executive Council, and shall hold office at the pleasure of the same; provided, that in its discretion, both of these offices may be filled by the same person.

SEC. 3. The duties of the officers shall be such as usually pertain to their respective offices, and such additional ones as

may be prescribed in this Constitution or the By-Laws enacted by the Executive Council under the authority granted by this Constitution.

SEC. 4. There shall be a Sub-Council to consist of one member from each of the regiments of cavalry, the same to be selected by the members of the Association in their respective regiments. The duties of the members of the Sub-Council shall be to solicit articles for publication in the JOURNAL; to collect proxies or obtain the votes or opinions of the members on any matter that may be brought before the Association and forward the same to the Secretary; to submit suggestions regarding the work of the Association; to secure new members to the Association, particularly from the newly assigned officers to their respective regiments, and, generally, to advance the interests of the Association. While so serving, they shall be exempt from dues, and shall be reimbursed for such actual expenses for postage, etc., as may be approved by the Executive Council.

Whenever present at any of the meetings of the Executive Council, they shall be members of the same.

#### ARTICLE VIII.

##### EXECUTIVE COUNCIL.

SECTION 1. The Executive Council shall consist of the President, the Vice-President, the five elected members, the Editor, and the Secretary and Treasurer. But when the President is not a resident of Fort Leavenworth, he shall for all purposes be considered as not belonging to the Executive Council, unless actually present.

SEC. 2. The Executive Council shall meet from time to time at the call of its chairman, who shall be the senior member of the Council present at the headquarters of the Association.

SEC. 3. Five members shall constitute a quorum for the transaction of business. But if through the removal of officers from Fort Leavenworth, or other cause, the Council be reduced below five members, such number as remain shall constitute a quorum for the purpose of filling vacancies, but for this purpose only.



SEC. 4. It shall require a majority vote of all members of the Council to carry any proposition, except an adjournment, which shall require a majority of those present.

SEC. 5. The several members of the Executive Council shall have an equal voice and vote in the determination of all questions acted upon by the Council, except that the Editor and the Secretary and Treasurer shall have no vote upon questions connected with their own appointment or removal, or their own compensation.

SEC. 6. The Executive Council shall be responsible for the general administration of the affairs of the Association. To this end they are empowered to carry out any measures whatsoever, which, in their judgment, seem expedient in order to further the interests of the Association, or to attain the ends and aims of the organization; *Provided, however,* That such measures do not conflict with any of the provisions of this Constitution. Within such limits the Council shall have power to make permanent regulations which they shall in such cases designate as By-Laws in contradistinction to their ordinary regulations, and such By-Laws shall be binding upon the Association and its members, and shall remain in force until duly revoked.

SEC. 7. The Executive Council shall have power to fill vacancies for unexpired terms which may occur in its membership.

SEC. 8. The Executive Council shall carefully examine and audit the accounts of the Secretary and Treasurer as soon as practicable after the close of the fiscal year, and at such other times as they may deem expedient.

SEC. 9. Funds of the Association can be expended only upon the order of the Executive Council, and money paid out or obligations incurred by the Secretary and Treasurer without such order shall be at his own risk, and if not subsequently approved by the Council he shall make the same good to the Association; but the auditing and approving of the accounts by the Council shall be considered as authorizing all transactions and expenditures previous to such action.

## ARTICLE IX.

## THE JOURNAL.

The Association shall publish a JOURNAL devoted to the interests of the organization, and in furtherance of its ends and aims, as laid down in Article III of this Constitution. This JOURNAL shall be published at least quarterly and, as nearly as practicable, at the close of each quarter of the calendar year: provided, that whenever, in the opinion of the Executive Council, the financial condition of the Association will warrant the same, the JOURNAL may be published bi-monthly or monthly.

## ARTICLE X.

## THE EDITOR.

The Editor shall edit the JOURNAL and such other document as may from time to time be published by the Association. In the performance of this duty he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible.

## ARTICLE XI.

## THE SECRETARY AND TREASURER.

The duties of the Secretary and Treasurer shall be such as usually devolve upon such officers. He shall keep a journal of the proceedings of the Association, and a separate record of the proceedings of the Executive Council. He shall generally be the organ of the Association in matters of finance, business and correspondence.

In the performance of these duties he shall be subject to the supervision of the Executive Council, to whom he shall be directly responsible. The books, papers and accounts pertaining to this office shall always be subject to examination by the Council. At each regular annual meeting he shall submit a report showing the financial condition of the Association at the time. After the close of each fiscal year of the Association (which shall be considered as identical with the calendar year) and prior to the annual meeting he shall sub-

mit to the Council a detailed report of the business transactions of his office during the preceding twelve months. This report shall show: The cash on hand at the beginning of the fiscal year; the receipts and expenditures during the year; the cash on hand at the close of the fiscal year; the assets of the Association; the outstanding obligations of the Association; the membership in the various classes at the beginning of the year and the gains and losses in the same during the year; and such other matters as may be called for by the Council. He shall also make such additional reports at such times and upon such subjects as the Executive Council may desire.

#### ARTICLE XII.

SECTION 1. This Constitution shall go into effect upon the day of its adoption, and amendments made to the same shall be effective on the date of their adoption.

SEC. 2. Although life memberships are no longer contemplated, such as are in existence at the time of the adoption of this Constitution shall continue to exist under the same conditions as originally granted.

#### ARTICLE XIII.

##### ALTERATION OF THE CONSTITUTION.

SECTION 1. The Constitution may be amended by a two-thirds vote of the *regular, active* members present or properly represented by proxy, at an annual meeting of the Association. Proposed alterations shall be furnished the Secretary in writing, signed by five or more members, not less than four months prior to the meeting at which they are to be acted upon. The Secretary, under the direction of the Executive Council, shall publish such proposed alterations to the Association not less than three months prior to said meeting.

## BRANCH CAVALRY ASSOCIATIONS.

The idea, which was advanced at the annual meeting of the Cavalry Association, of having branch associations at all, or at least all the larger cavalry garrisons and to form one here, has since been carried out to the extent of organizing the one at Fort Leavenworth.

The first preliminary meeting was held on February 13, 1909, which was attended by all the cavalry officers present for duty and which resulted in taking steps to form the permanent organization, adopting a constitution and electing officers. All this has since been done and the Fort Leavenworth Branch is now fully organized. Its constitution is printed below, and, while it will be found to be simple in form, it is believed it will answer all purposes.

Since the annual meeting it has been learned that others have conceived this same idea and that early in November last the cavalry officers on duty in and near Manila took steps to form a similar branch in the Philippines, and that later, on December 20, 1908, such an organization was formed with over sixty cavalry officers present. From the report of these meetings furnished the Secretary of the Cavalry Association and from the list of officers present at them, it is evident that they are starting out with the correct spirit and that they have the material with which to make their branch a strong factor in the work to be carried on by these branch associations.

The following extract is made from the above mentioned report :

"Believing that the strength of any movement lies in unity of action, we desire to lay before the Cavalry Association the question of admitting this Philippine association as a branch of the parent association under any appropriate name, such as, for instance, 'Philippine Branch U. S. Cavalry Association'

"The object in such a step would be to insure our efforts not being counter to or along different lines from those being made in the States with like purposes in view and having some central committee to inspire and control the

otherwise opposed, scattered and ineffective efforts of cavalry officers and associations of cavalry officers here and elsewhere."

This report of the action taken by the cavalry officers in the Philippines was received too late for consideration at the annual meeting of the Association, but it has been replied to by the Executive Council to the following effect:

"Our constitution is now silent on the question of branch associations, although they were provided for in the first one adopted and for this reason the Executive Council believes that it is without authority to approve or disapprove of their formation. At the same time it wishes to be recorded as being heartily in favor of the movement and, in case it is thought desirable to have the Constitution amended in this respect and provide some plan of supervision whereby unified and harmonious action may be secured in the work to be carried on by these branches, the Council will be pleased to prepare and send out proposed amendments to the Constitution embodying this idea."

The Constitution adopted November 9, 1885, when the Association was first organized, contained the following provisions regarding branch associations:

"Branches of this Association may be established at any station where there are eight regular members. At a station where there is no branch a corresponding secretary shall be appointed by the President, who shall attend to the business pertaining to the Association for that station.

"The officers of a branch shall be a vice-president and a corresponding secretary.

"The vice-president shall perform the same duty for the branch as prescribed for the President of the Association.

"The corresponding secretary of a branch shall keep a register of the members residing in his vicinity and an account current with each. He shall keep a journal of the proceedings of each branch and a copy of the Constitution and By-Laws. He shall give due notice of the meetings of his branch. He shall forward to the Secretary and Treasurer of the Association all papers read before his branch and keep

himself informed of all business relating to his branch. He shall receive and distribute publications. He shall collect dues from members of his branch and give receipts therefor. He shall be authorized to expend such part of the funds in his possession for stationery, postage and other incidental expenses as may be necessary. He shall, at the end of each quarter, render to the Secretary and Treasurer a detailed statement of moneys received and expended, and shall forward the funds remaining on hand, retaining only sufficient to defray the estimated current expenses of the branch for the ensuing quarter.

"Monthly meetings of each branch may be held upon such dates as the branch may decide; but if there be no paper to be read or business to be transacted at the appointed date, the corresponding secretary may omit the call for the regular meeting. Special meetings may be called when necessary.

"Branches will make such by-laws, not inconsistent with this Constitution, as may be deemed necessary for a proper transaction of business."

When these provisions of the Constitution regarding branch associations were stricken out is unknown, as the records fail to show what the amendments were when the Constitution was amended—on February 13, 1888, March 9, 1891, and January 17, 1898—certain amendments having been adopted on those dates, but it is certain that it was on or prior to the last mentioned date. The Constitution, as amended January 17, 1898, has been in force from that date to the annual meeting of this year, and the provisions as to branches does not appear in it.

Inasmuch as we once did have branch associations, and the authority for them has been stricken from the Constitution, the Executive Council does not feel authorized, as stated above, in taking any action pro or con, beyond that of encouraging the movement until the wishes of the Association in this respect are obtained.

## CONSTITUTION

OF THE FORT LEAVENWORTH, KANSAS, BRANCH OF THE  
UNITED STATES CAVALRY ASSOCIATION.

## ARTICLE I.

## TITLE.

This society shall be known as the Fort Leavenworth Branch of the United States Cavalry Association.

## ARTICLE II.

## OBJECT.

SECTION 1. The object of this association shall be to interest all officers of the cavalry stationed at Fort Leavenworth, Kansas, in the professional advancement of its members and the advancement of the cavalry service generally. To attain these ends meetings shall be held at frequent intervals, when papers of interest may be read and subjects relating to the improvement of the cavalry discussed. The branch will also endeavor to supply the Executive Council of the United States Cavalry Association with such papers as are believed may be desirable to publish in the JOURNAL of the Association. All propositions which it is believed by the branch might be of interest to the cavalry service will be submitted to the Executive Council for such action as it deems advisable and may be published in the CAVALRY JOURNAL or otherwise communicated to the service.

## ARTICLE III.

## MEMBERSHIP.

SECTION 1. All officers belonging to the United States Cavalry stationed at Fort Leavenworth are eligible to membership.

SEC. 2. Any person eligible to membership may become such upon signing the Constitution. No dues will be charged, but an equal assessment upon all members of the branch may be made to pay any authorized expenses upon a majority vote of the membership.

SEC. 3. Any member may withdraw from the Association at any time by tendering his resignation in writing. A change of station will terminate membership.

#### ARTICLE IV.

##### RIGHTS AND OBLIGATIONS OF MEMBERS.

SECTION 1. Every member of this branch shall be entitled to one vote at all regular or special meetings of the branch and all shall have equal rights and privileges. Votes may be cast in person or by proxy, but in the latter case the authority therefor must be in writing.

#### ARTICLE V.

##### MEETINGS.

SECTION 1. The regular meetings of the branch shall be held at 8:00 P. M. on the last Saturday of February, April, June, August, October and December.

SEC. 2. Special meetings shall be called by the president upon the request of five members. When meetings are called, three days' notice thereof shall be given to each member by the secretary. Twenty per cent. of the total membership of the branch present shall constitute a quorum.

#### ARTICLE VI.

##### OFFICERS.

SECTION 1. The officers of the branch shall be: A President, a Vice President, a Secretary and Treasurer. Their terms of office shall be one year, or until their successors are elected.

SEC. 2. The duties of the officers shall be such as usually pertain to their respective offices, and such additional duties as may be prescribed by this branch of the Association in By-Laws or resolutions.

SEC. 3. The officers shall constitute an executive committee to carry out the object expressed in Article II.



## ARTICLE VII.

## AMENDMENTS TO THE CONSTITUTION.

SECTION I. The Constitution may be amended by a majority vote of the regular members of the branch. Proposed amendments shall be furnished the secretary in writing, signed by five or more members, not less than thirty days prior to the meeting at which they are to be acted upon. The secretary shall publish such proposed amendments to the branch not less than fifteen days prior to said meeting.

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## THE MASON SHELTER TENT CAPE.

There has been received recently a pamphlet describing a combined cape and shelter tent that has been devised by Lieutenant Charles H. Mason, Eighth United States Infantry. If the claims made for this combination for providing in one garment, if it may be so called, an improved shelter tent, a rain cape and a water-proof covering for the blanket roll, are fulfilled in practice, it will be a welcome addition or rather substitution for the soldier's present equipment in this line.

The apparent objection to this combination, judging from the cuts, are that inasmuch as it provides shelter for but one man, too much room would be required for making camp, and also that it appears to be bulky.

However, this invention has been tested by the Infantry Board and at the Fort Riley maneuvers and it is understood that the reports have been favorable.

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## HISTORY OF THE NINTH U. S. INFANTRY.

There is soon to be published and delivered to subscribers the "History of the Ninth U. S. Infantry." This book, of about 400 pages, will cover the history of the regiment from its organization in 1799 to the present time. It will be illustrated with many photographs of companies and officers,

present and past, and will be of particular interest to those connected at any time with this regiment.

It should be in every military library and others where the history of our country is made a feature.

Inasmuch as only the required number to fill the advance orders will be printed, those desiring to subscribe for the book should communicate with the Regimental Adjutant, Captain F. R. Brown, without delay.



**Field  
Fortifications  
for Line  
Officers.\***

As the name implies, this book is written principally for line officers and comes to fill what has heretofore been an absolute gap in the texts available in English on applied principles of preparation for and conduct of battle.

Our books on field fortifications have presented to the line officer either a condensed mixture of old and new methods with little or no guide to their application, or have gone into the minute details of fortifications of such an elaborate and complicated nature as would only be prepared under the supervision of skilled engineer officers, and therefore would not be of immediate importance to line officers. Captain Woodruff's book shows the result of the most careful consideration of all reports, etc., of the military observers, American and foreign, of the late Russo-Japanese War, as well as the views of military experts on this subject and his own observations as an instructor in applied field fortifications at the Army Service Schools.

The following sentences from the first paragraph of the

\*"APPLIED PRINCIPLES OF FIELD FORTIFICATIONS FOR LINE OFFICERS." By Captain James A. Woodruff, Corps of Engineers, U. S. Army. Published by the author and supplied to officers of the army by the Secretary of the Army Service Schools, Fort Leavenworth, Kansas. General agents, the U. S. Cavalry Association, Fort Leavenworth, Kansas. Price \$1.00.

book are indicative of the practical nature of the entire text: "In the following discussion no attempt will be made to lay down rules or to establish typical forms of works that will be suitable to all circumstances. \* \* \* As the tactical considerations will vary greatly in different cases, it would be impossible, even if it were advisable, to lay down any system which would be applicable to all. Even the design of the individual works depends solely on the tactical considerations."

Chapter I deals with the general principles of field fortifications, covering their adaption to natural ground features, the different classes of defensive positions, advance positions, first and second line, tactical situations of works, supporting points, artillery positions, intervals, a lengthy discussion of the belt type of defensive works, etc. These subjects are presented and discussed in a direct, practical manner, not in the dry, stereotyped fashion so common to military writers.

In Chapter II the tactical organization of infantry in defense is thoroughly discussed, giving the reader an active idea of how an infantry garrison should be disposed.

The tactical employment of artillery in defense furnishes the subject of the next chapter. The questions of mobility, armament, locations of emplacements, dispersion, positions with reference to infantry, etc., are fully covered.

Under Chapter IV appear the discussions and drawings of infantry works. It is very complete and shows the most advanced ideas on redoubts, trenches, bomb proofs, communicating trenches, etc.

The approved type of profile, the triangular, bears little resemblance to the plates in our old text-books. It is quite interesting to read that our favorite shelter trench, about the only form of fortification our line officer ever attempts to teach his men, is obsolete except in the attack, and is there rapidly altered into something better. The author gives the following from a Manchurian observer's report: "The lying down trench I never saw. The character of the shrapnel is such that the lying down trench provides cover against it only, not shelter. The man who lies down converts his vertical target into a horizontal one, but does not diminish

it, and if his presence is known or suspected by the opponent's artillery he will not derive much advantage from the lying down trench." The plates are very clear and easy to understand.

Chapters V to X deal with artillery positions, auxiliary means of defense, determination of strength of garrison, defense of small isolated posts by detachments, fortifications on the offensive and the calculation of men and time required to execute defensive works. An appendix gives tables showing the tools, etc., carried by the troops in their regimental trains, in pack and other trains.

To complete the book and more than double its value to the line officer three problems in field fortification are given in Chapter XI with solutions worked out in detail and shown on excellent maps. Here are examples and a full description of how to apply field fortifications in the training of officers and troops in garrison or at summer maneuvers just as satisfactorily as you can apply your drill regulations covering the ceremony of dress parade. A regiment of infantry, battery of artillery and a troop or more of cavalry are placed in situations requiring them to take up a defensive position, with from two hours in one case to a day or two in another in which to select and prepare the position. All the requirements of such a situation are brought out, the selection of the line, its division, disposition of troops, location of artillery, character and design of firing, cover, and communicating trenches, time and labor to prepare them, obstacles, demolitions, etc.

A description is given of how a company, battalion or regimental commander can take out his officers, without troops, and in an hour or two solve, in the most practical manner, a very instructive problem.

Heretofore our officers have read or studied books on field fortifications casually or in preparation for examinations. The dry, unapplied principles have gone in one ear, and, mostly, out the other. A few dimensions of earth works, formulæ for powder charges and designs of bridges have lingered in their heads to remind them of a dull subject. This book does not deal with bridge building, rope fasten-

ings, the construction of gabions, etc. You can get that in our official military Trautwine—the Engineer Field Manual. It does make clear how to examine ground, lay out a line, prepare it and dispose your force in a tactically correct and rapid manner.

The book is well bound, printed in clear type on good paper, and furnished with numerous plates and an elaborate index.

G. C. M.

**Recollections  
of a  
Cavalryman.\***

"The Personal Recollections of a Cavalryman," by Colonel J. H. Kidd, late Colonel Sixth Michigan Cavalry, has just been issued by the Sentinel Printing Company of Ionia, Michigan.

It is a well written and most interesting recital of the experiences of the author during the Civil War. While it relates largely to the personal experiences of the author, it necessarily includes the operations of the Sixth Michigan Cavalry and the brigade and division to which the regiment was attached. This regiment served in General Custer's Brigade from July 1, 1863, to the close of the war. This is sufficient testimony that the regiment had some very exciting and thrilling experiences.

In addition to the many interesting recitals of personal, regimental and brigade experiences, the book contains a number of valuable lessons for the professional reader. In Chapter IV the author ably discusses the apparent lack of appreciation on the part of the commanders of the Army of the Potomac of the tactical and strategical value of a well organized cavalry force. In his closing remarks the Colonel says: "Sheridan did not take command of the cavalry corps to handle it as such until the spring of 1864. Even then, as we shall see later, he had to quarrel with the commander of the army in order to compel recognition of its value as a tactical unit upon the field of battle."

\*"PERSONAL RECOLLECTIONS OF A CAVALRYMAN." By Colonel J. H. Kidd, formerly Sixth Michigan Cavalry and Brevet Brigadier General of Volunteers. Published by the author, Ionia, Michigan. Price, \$2.00.

On page 96 the Colonel describes a raid through Northern Virginia led by Sir Percy Wyndham, temporarily commanding the brigade. He says that the command had no apparent objective, but did a lot of wild riding over muddy roads during cold and disagreeable weather. He explains that in addition to the folly of such trips, it is very disastrous so far as the horses were concerned. When the command had returned to camp he found that out of eighty horses in his troop only twenty were fit for duty, part of which had been left in camp and did not accompany the expedition.

This is a very interesting and instructive book and a valuable addition to any cavalry officer's library.

E. E. B.

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**History  
of the Army  
Service  
Schools.**

This is a pamphlet from the Staff College press that should be of interest to the graduates of the several schools located at Fort Leavenworth and to others who have watched the development of this institution. It is compiled by Henry Shindler, who has been so long connected with the schools and with Fort Leavenworth. It is well illustrated with cuts showing the old and present academic buildings, the Signal School laboratory and various other views and portraits.

It has a complete list of graduates and of the commandants and other officers who have been on duty at these schools and the present curriculum of the schools.

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**Fifteen  
Decisive Battles.\***

The first part of this new work, under the old and familiar title, is a reprint of Creasy's book, which first appeared in 1851, to which had been added accounts in a similar style

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\*"FIFTEEN DECISIVE BATTLES OF THE WORLD, FROM MARATHON TO WATERLOO." New edition, to which are added Quebec, Yorktown, Vicksburg, Gettysburg, Sedan, Manila Bay, Santiago and Tsu-Shima (the Sea of Japan). With maps and illustrations. Price, \$1.25. Harper & Brothers, New York. 1908.

of the battles of Quebec, Yorktown, Vicksburg, Gettysburg, Sedan, Manila Bay, Santiago and Tsu-Shima.

Each battle is described in a concise manner and the important details are accurately stated. For the general reader this book is valuable. The subjects, however, are handled too briefly to be of any particular value from a tactical or strategical standpoint. As a book of reference containing a brief history of each of the campaigns it is splendid.

With each battle there is a very good general map of small scale.

E. E. B.



